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Inventor(s): Alexander Gaiger et al.

Express Mail No. EV74177748US      "REPLACEMENT SHEET"

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HU: G G P A P P P A P P P P P P P P H S F I K Q E P S W G G A E P H E E Q C L S A F T V H F S G Q F T G T A G  
MO: G G P A P P P A P P P P P P P P H S F I K Q E P S W G G A E P H E E Q C L S A F T L H F S G Q F T G T A G

HU: A C R Y G P F G P P P S Q A S S G Q A R M F P N A P Y L P S C L E S Q P A I R N Q G Y S T V T F D G T P S  
MO: A C R Y G P F G P P P S Q A S S G Q A R M F P N A P Y L P S C L E S Q P T I R N Q G Y S T V T F D G A P S

HU: Y G H T P S H A A Q F P N H S F K H E D P M G Q Q G S L G E Q Q Y S V P P P V Y G C H T P T D S C T G  
MO: Y G H T P S H A A Q F P N H S F K H E D P M G Q Q G S L G E Q Q Y S V P P P V Y G C H T P T D S C T G

HU: S Q A L L L R T P Y S S D N L Y Q M T S Q L E C M T W N Q M N L G A T L K G V A A G S S S V K W T E  
MO: S Q A L L L R T P Y S S D N L Y Q M T S Q L E C M T W N Q M N L G A T L K G M A A G S S S V K W T E

HU: G Q S N H S T G Y E S D N H T P I L C G A Q Y R I H T H G V F R G I Q D V R R V P G V A P T L V R S A S  
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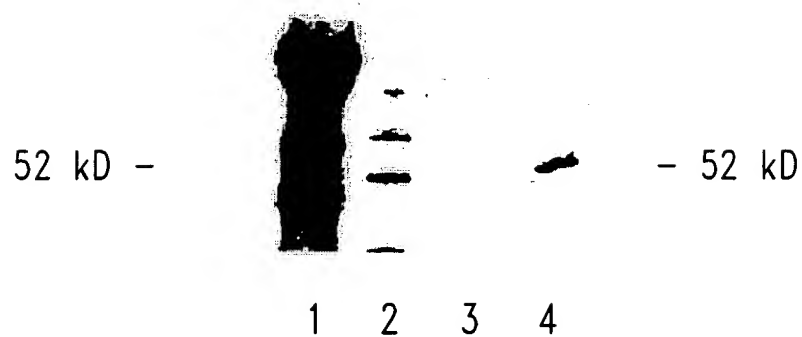
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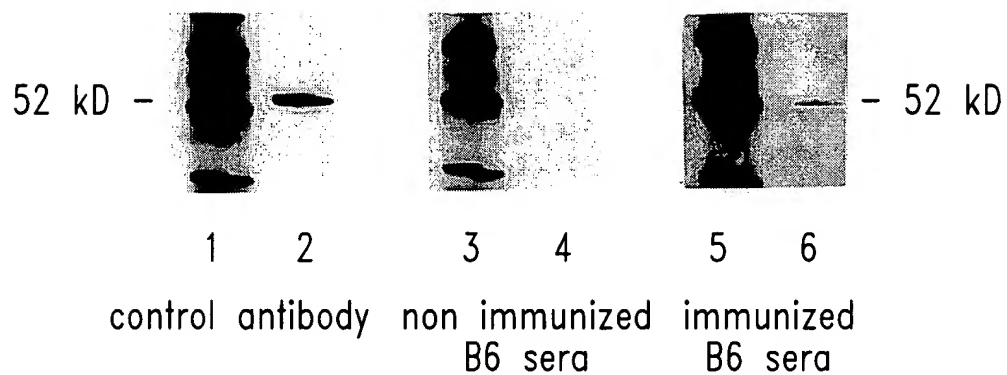
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*Fig. 1*

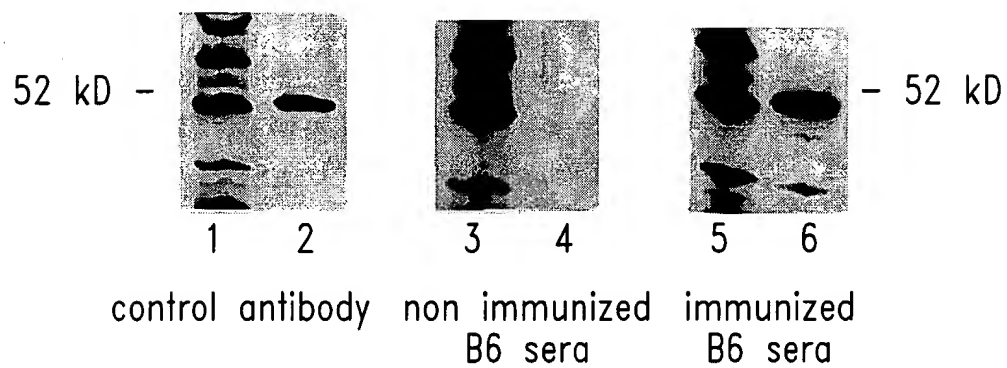
BEST AVAILABLE COPY



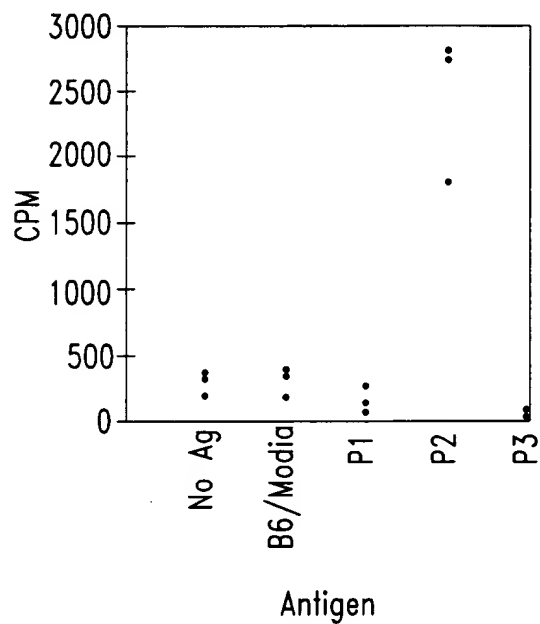
*Fig. 2*



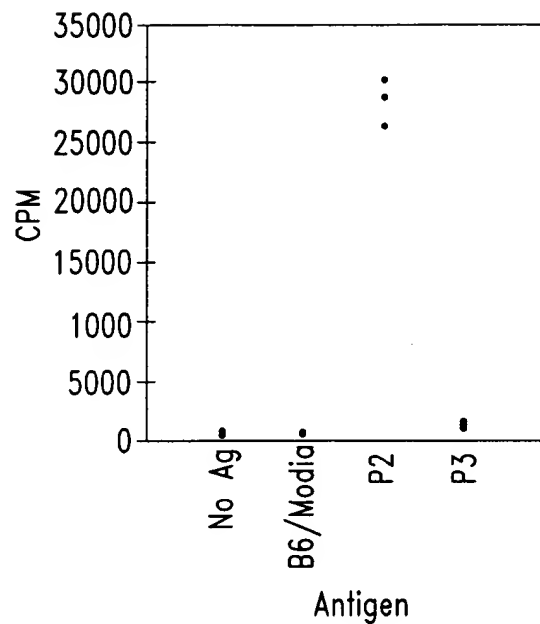
*Fig. 3*



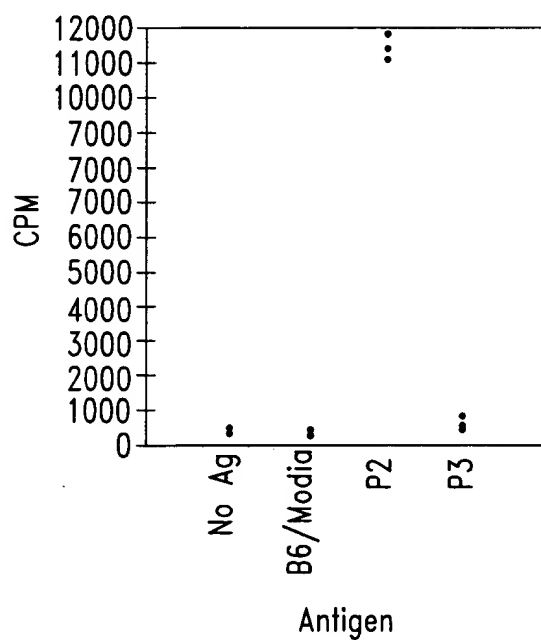
*Fig. 4*



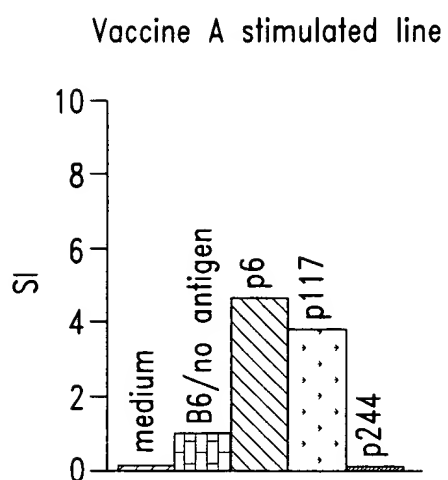
*Fig. 5A*



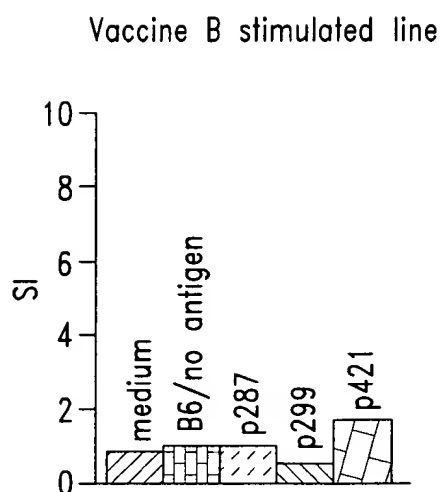
*Fig. 5B*



*Fig. 5C*

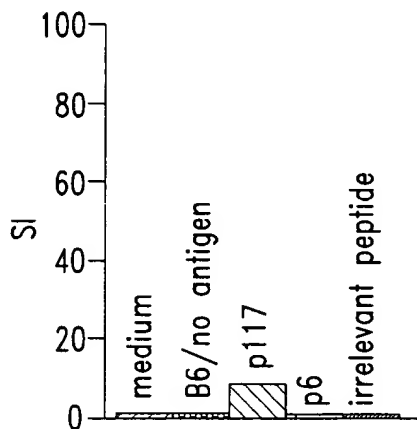


*Fig. 6A*



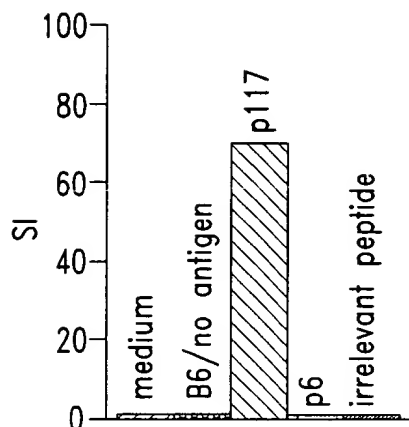
*Fig. 6B*

p117-139 stimulated line



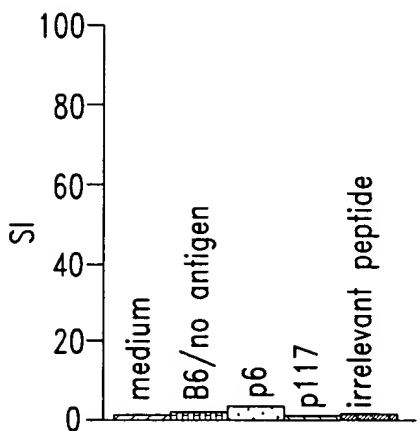
*Fig. 7A*

p117-139 stimulated clone



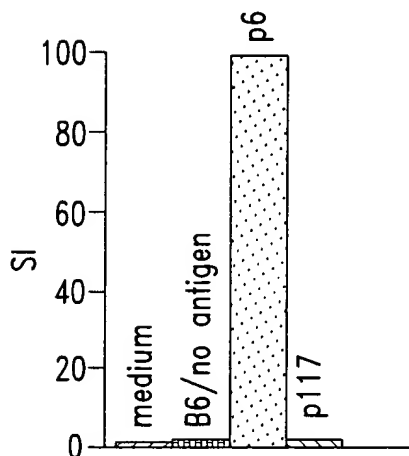
*Fig. 7B*

p6-22 stimulated line



*Fig. 7C*

p6-22 stimulated clone



*Fig. 7D*

```

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.....AAAAAAAAAAAAAAAA.....AAAAA.....AAAAAAAAAAAA.....
.....RRRR.....
.....
.....

80  85  90  95  100 105 110 115 120 125 130 135 140 145 150
PSWGGAEPEEQCLSAFTVHFSGQFTGTAGACRYGPFPPPPSQASSGQARMFPNAPYLPSCLSQPAIRNQGS
.....AAA.....AAAA.....AAA.....AAAAA.....
.....RRRR.....RRRR.....
.....DDDDDDDD.....
.....

155 160 165 170 175 180 185 190 195 200 205 210 215 220 225
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.....AAAA.....AAAAA.....AA
.....RRRR.....
.....DDDDDDDDDDDD...
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230 235 240 245 250 255 260 265 270 275 280 285 290 295 300
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AAAAA.....AAA.AAA.....AAAAAAAAA
.....RRRRRRRRR.....RRRR.....RRRR.....
DDDDDD.....DDDDDDDDDD.....
.....dddd.....

305 310 315 320 325 330 335 340 345 350 355 360 365 370 375
RRVPGVAPTLVRSASETSEKRPFCAYPGCNKRYFKLSHLQMSRKHTGEKPYQCDKDCERRFSRSDQLKRHR
AAAAA.AAAAAAAAAA.....AAAA.AAAAAAAAAA.
.....RRRRR.....RRRR.....
.....DDDDDD.....
.....

380 385 390 395 400 405 410 415 420 425 430 435 440 445 450
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.....RRRR.RRRR.....
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.....dddddddddd.....

```

*Fig. 8A*



5 10 15 20 25 30 35 40 45 50 55 60 65 70 75  
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80 85 90 95 100 105 110 115 120 125 130 135 140 145 150  
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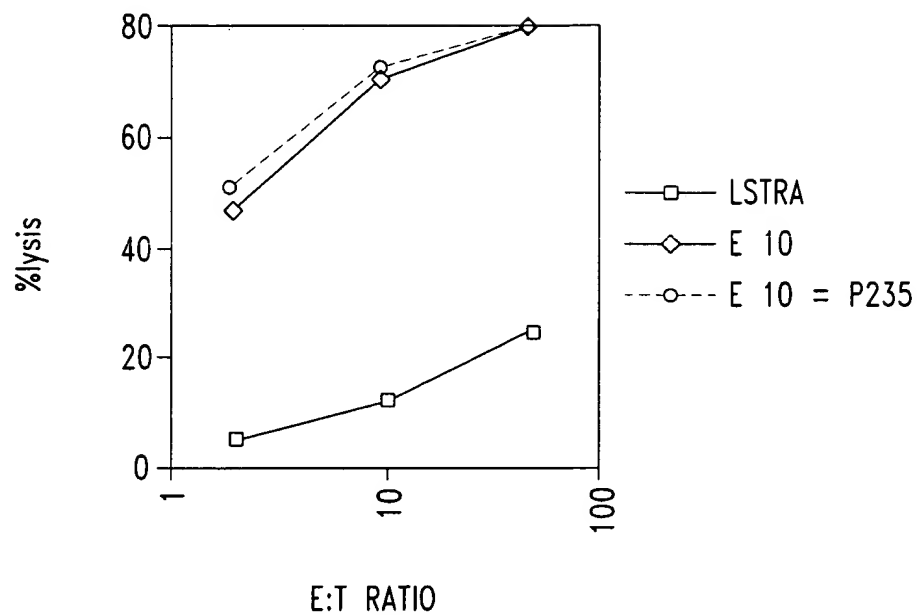
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.....RRRR.....  
.....DDDDDDDDDDDD.....  
.....  
.....

230 235 240 245 250 255 260 265 270 275 280 285 290 295 300  
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DDDDDD.....DDDDDDDDDD.....  
.....dddd.....

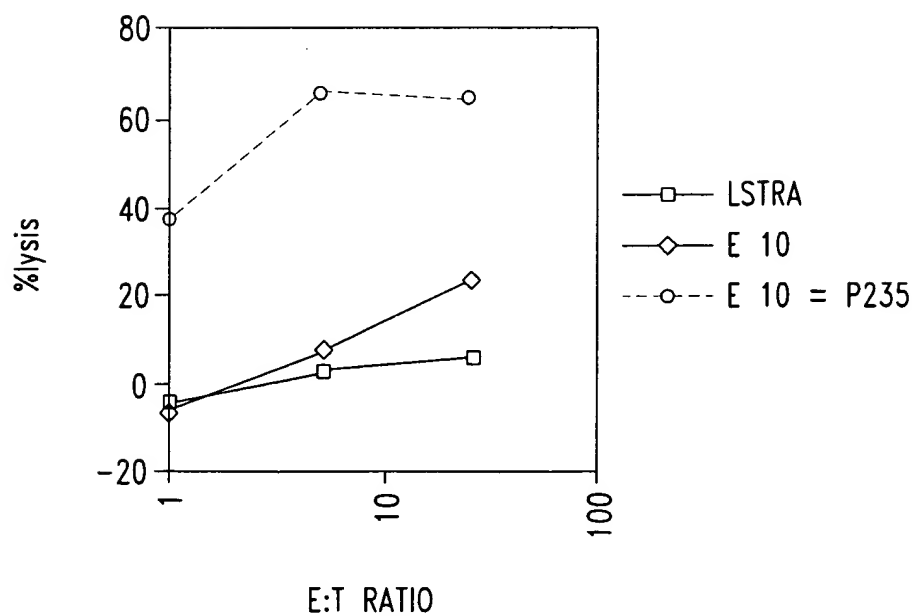
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..DDDDDDDDDD.....  
.....  
.....

380 385 390 395 400 405 410 415 420 425 430 435 440 445 450  
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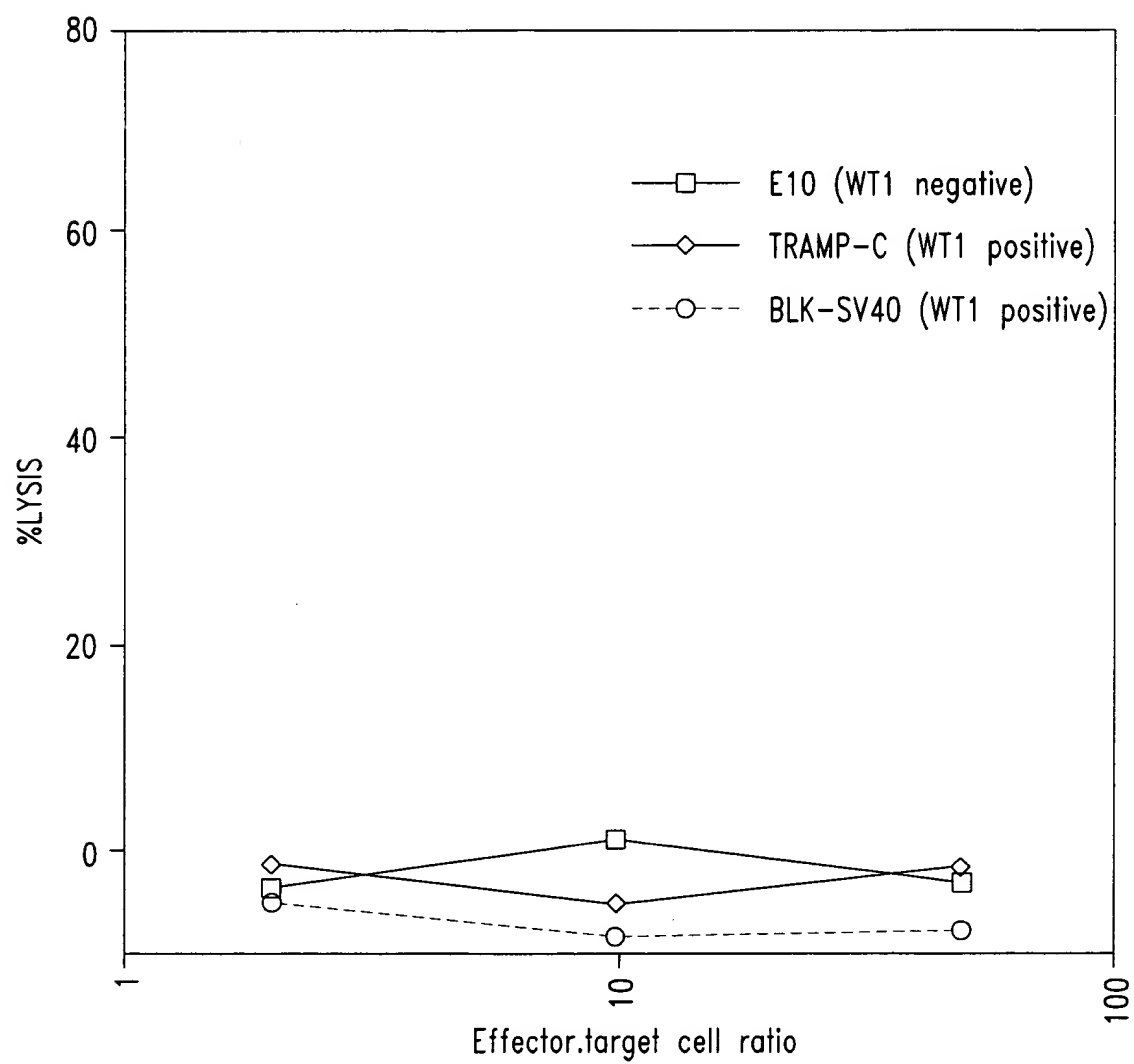
*Fig. 8B*



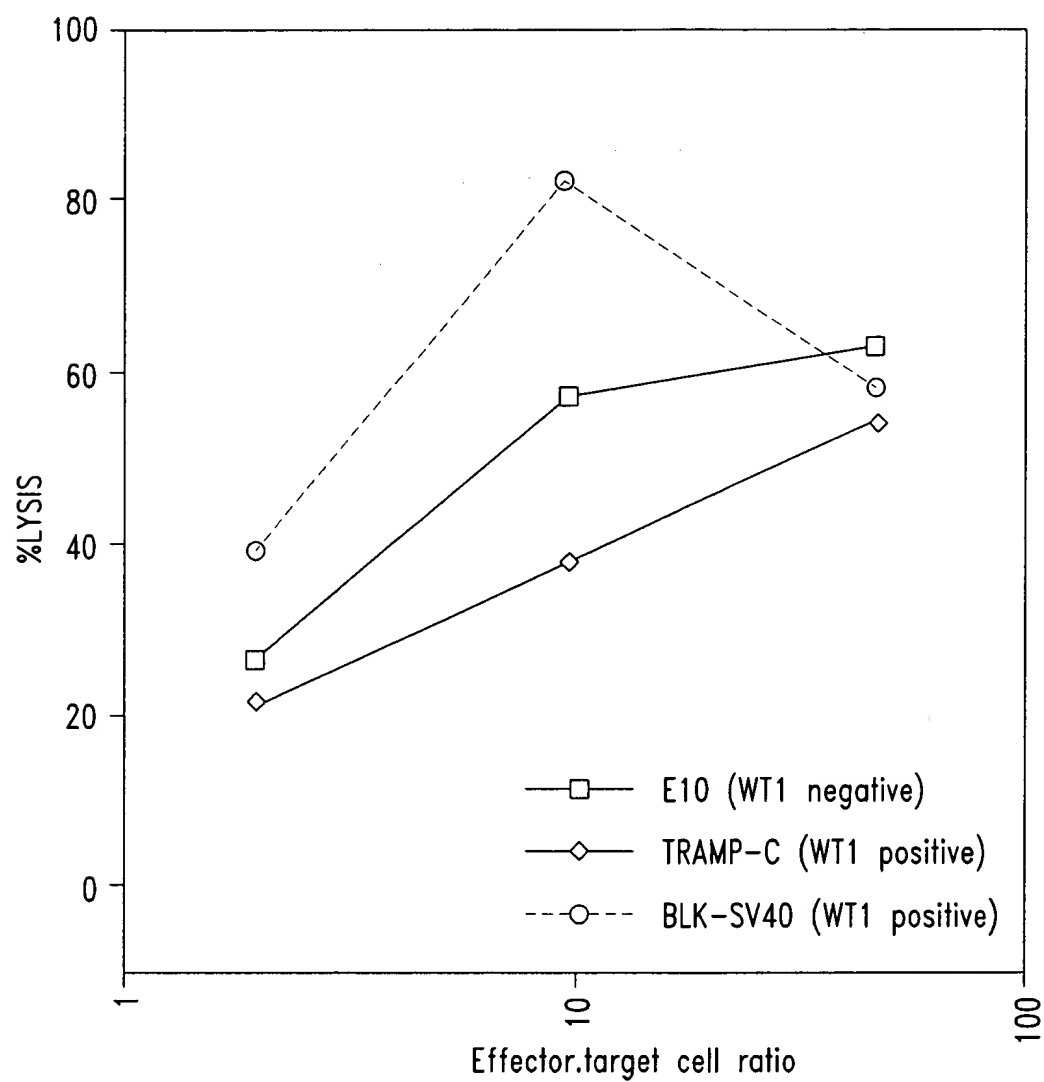
*Fig. 9A*



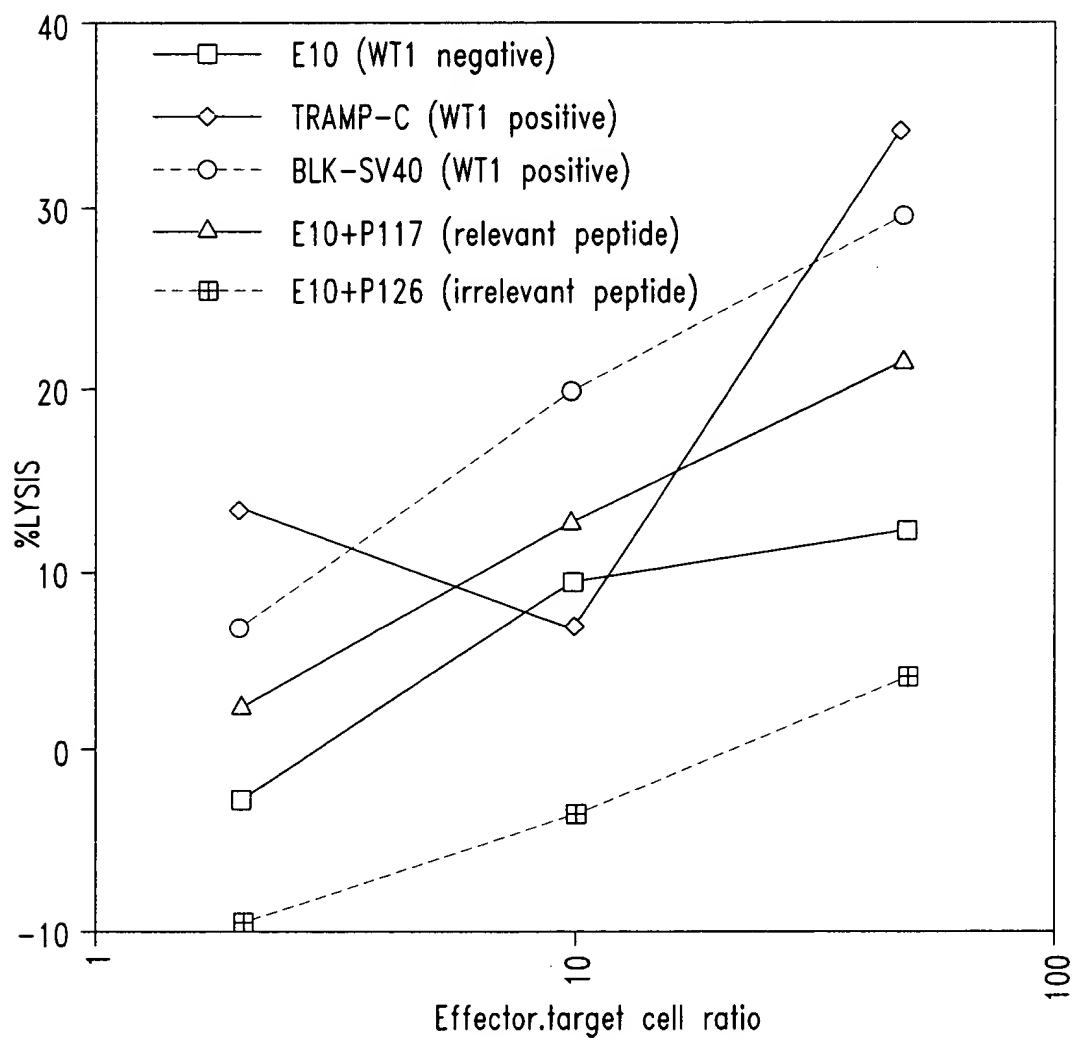
*Fig. 9B*



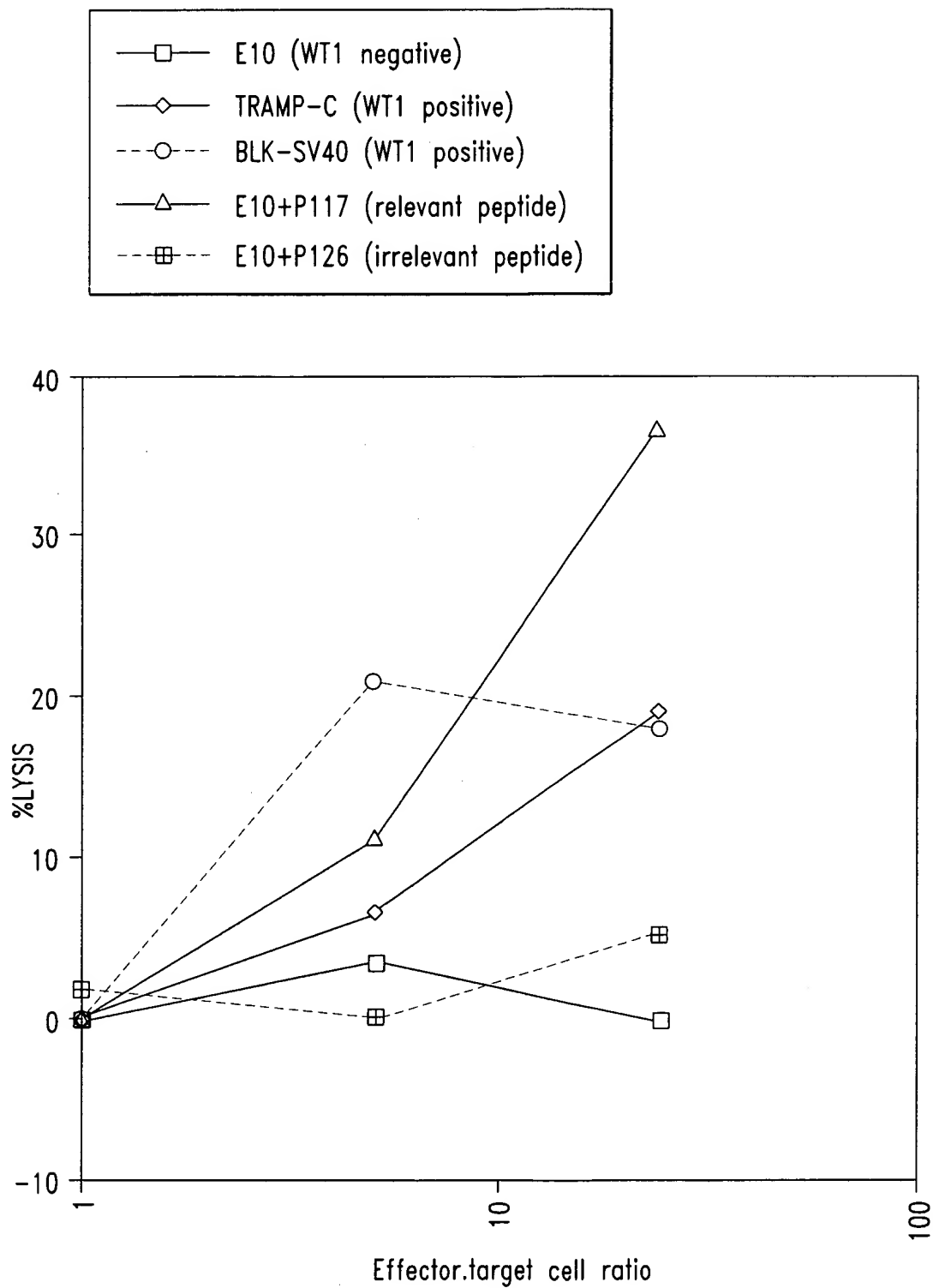
*Fig. 10A*



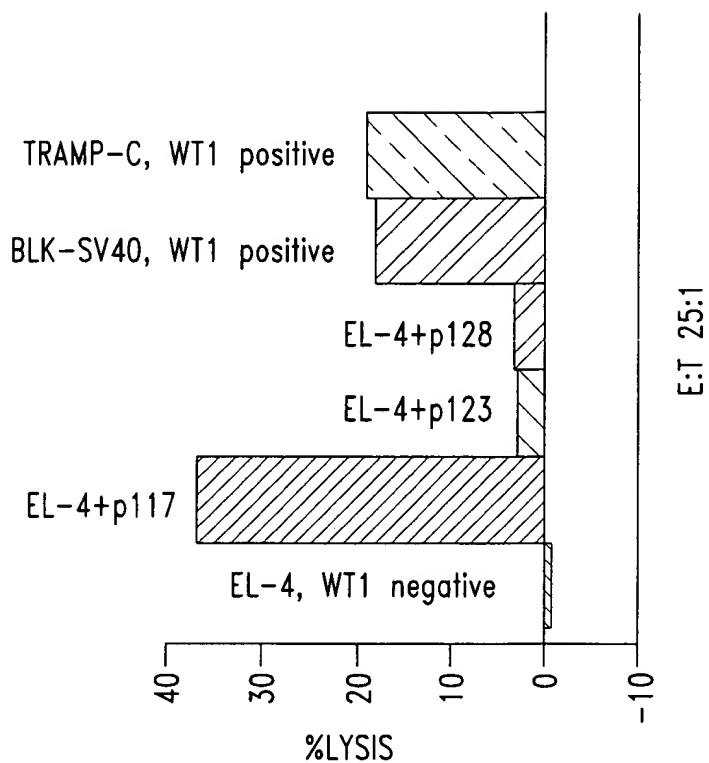
*Fig. 10B*



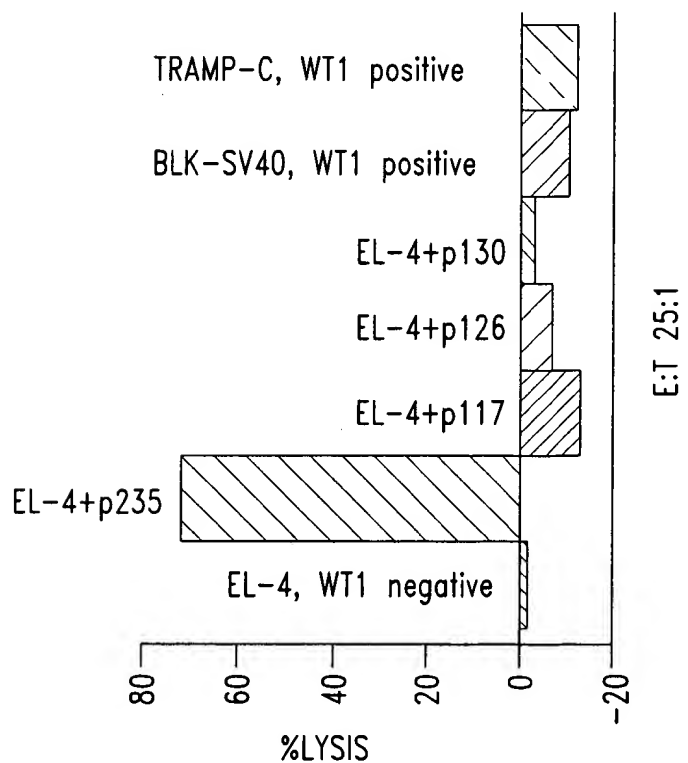
*Fig. 10C*



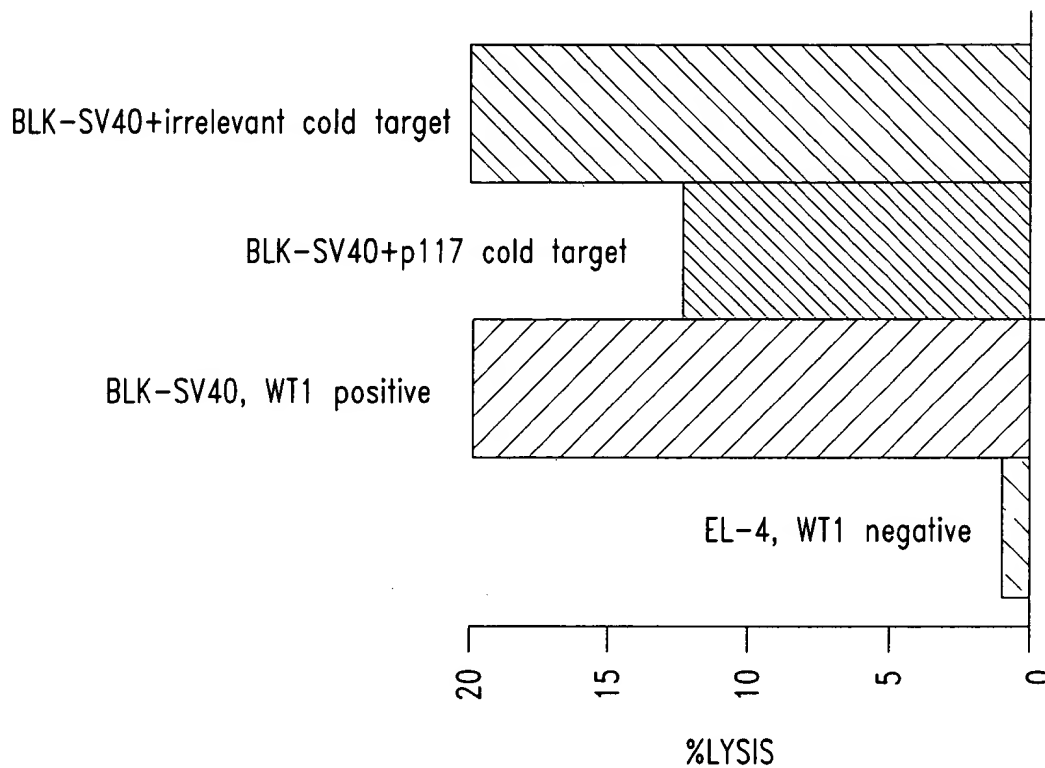
*Fig. 10D*



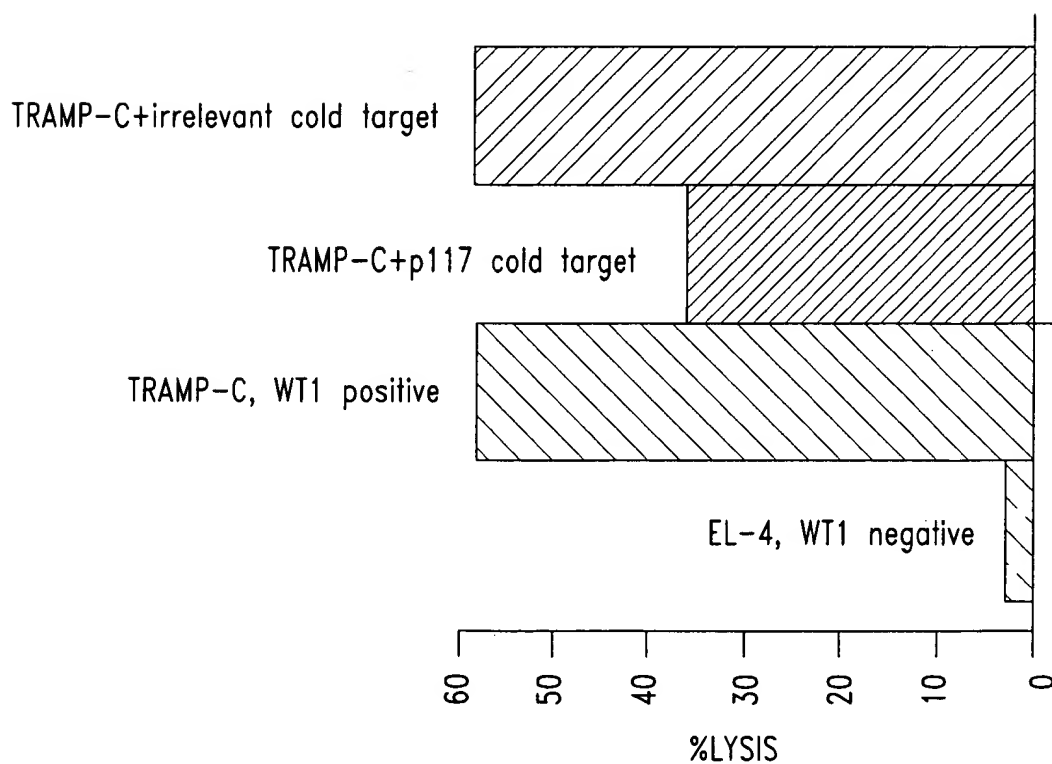
*Fig. 11B*



*Fig. 11A*

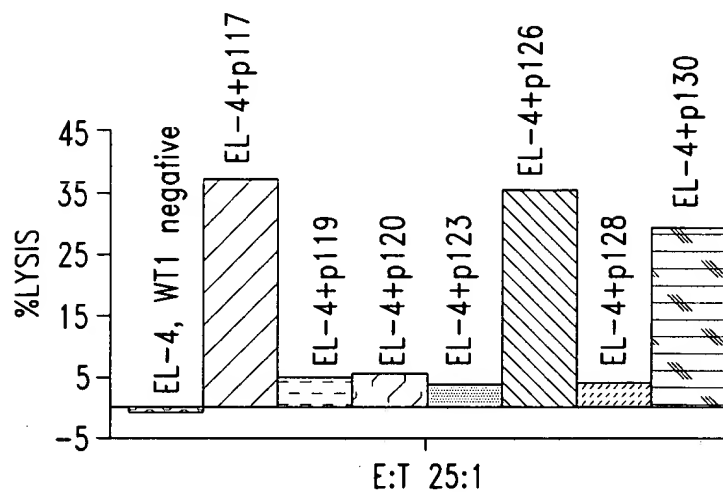


E:T 25:1  
*Fig. 12B*

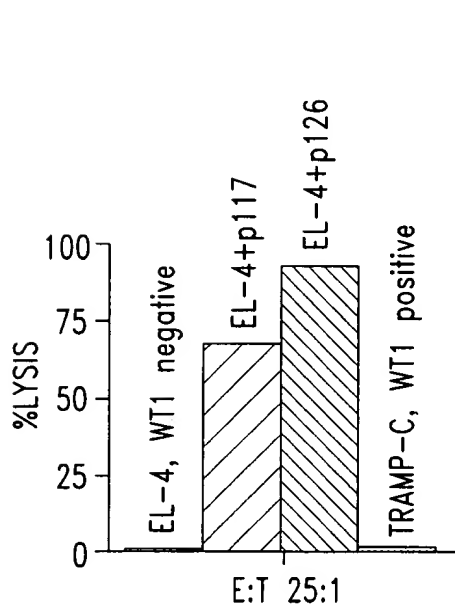


E:T 25:1  
*Fig. 12A*

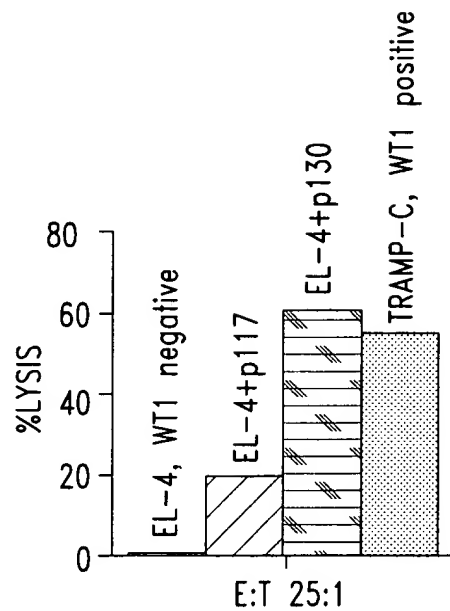




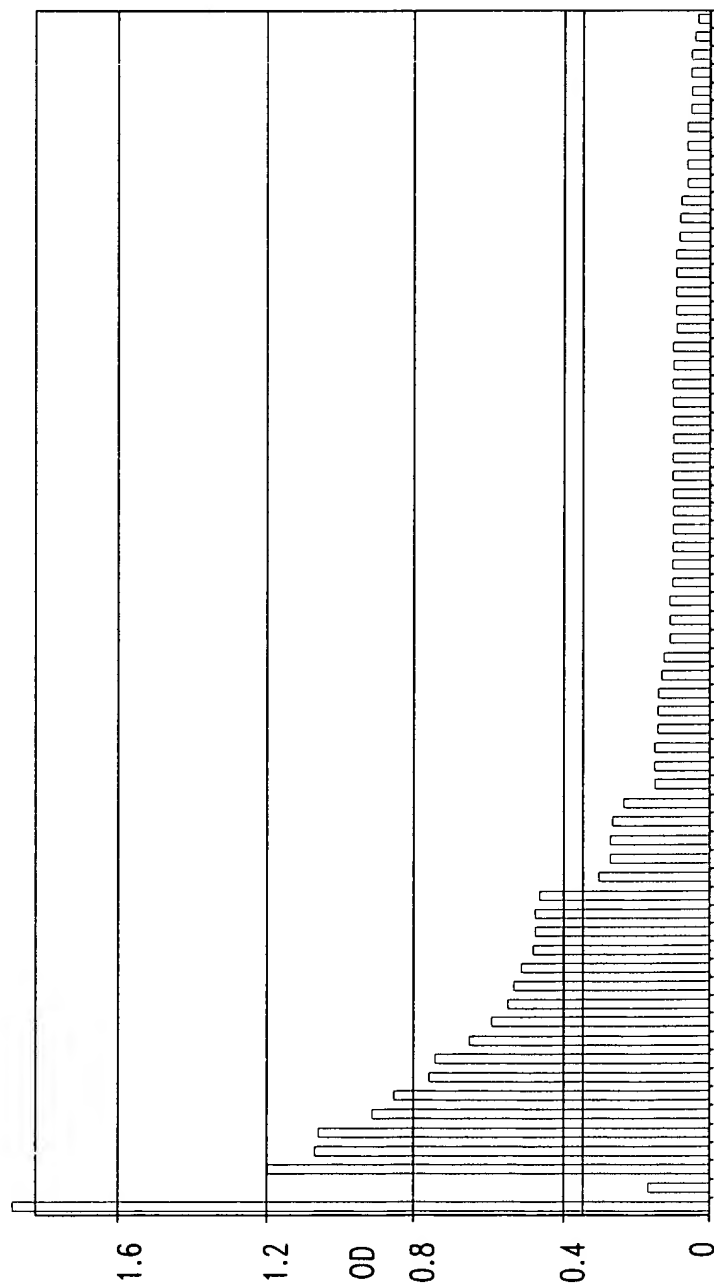
*Fig. 13A*



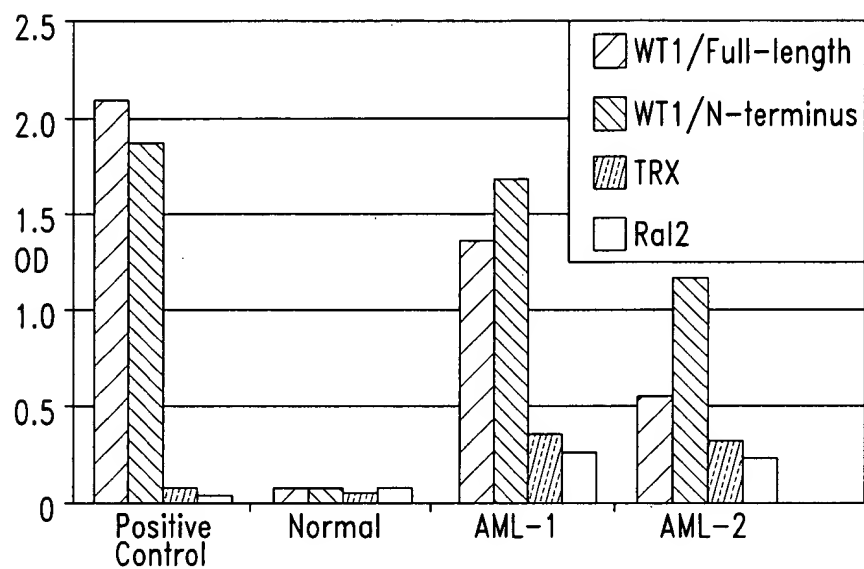
*Fig. 13B*



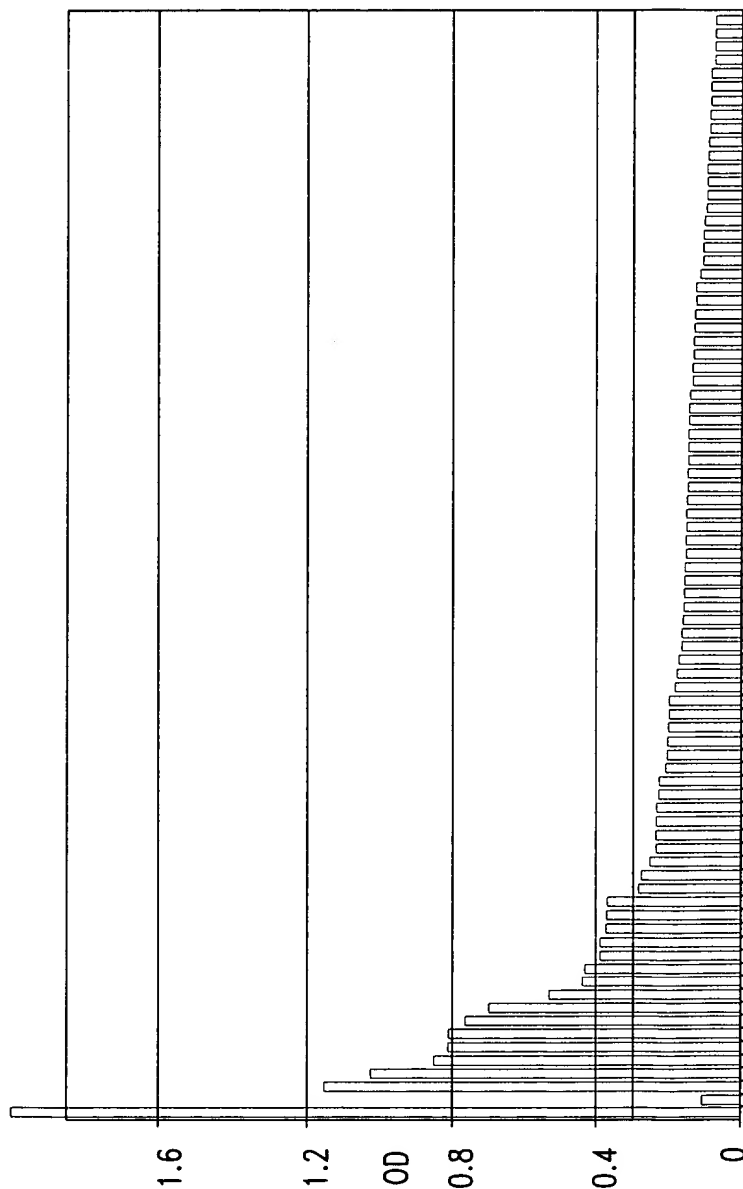
*Fig. 13C*



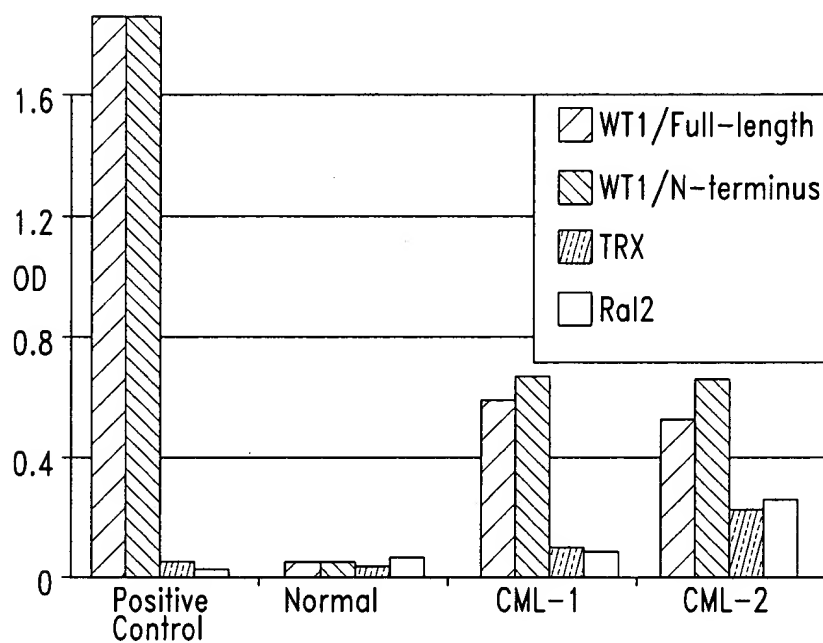
*Fig. 14*



*Fig. 15*



*Fig. 16*

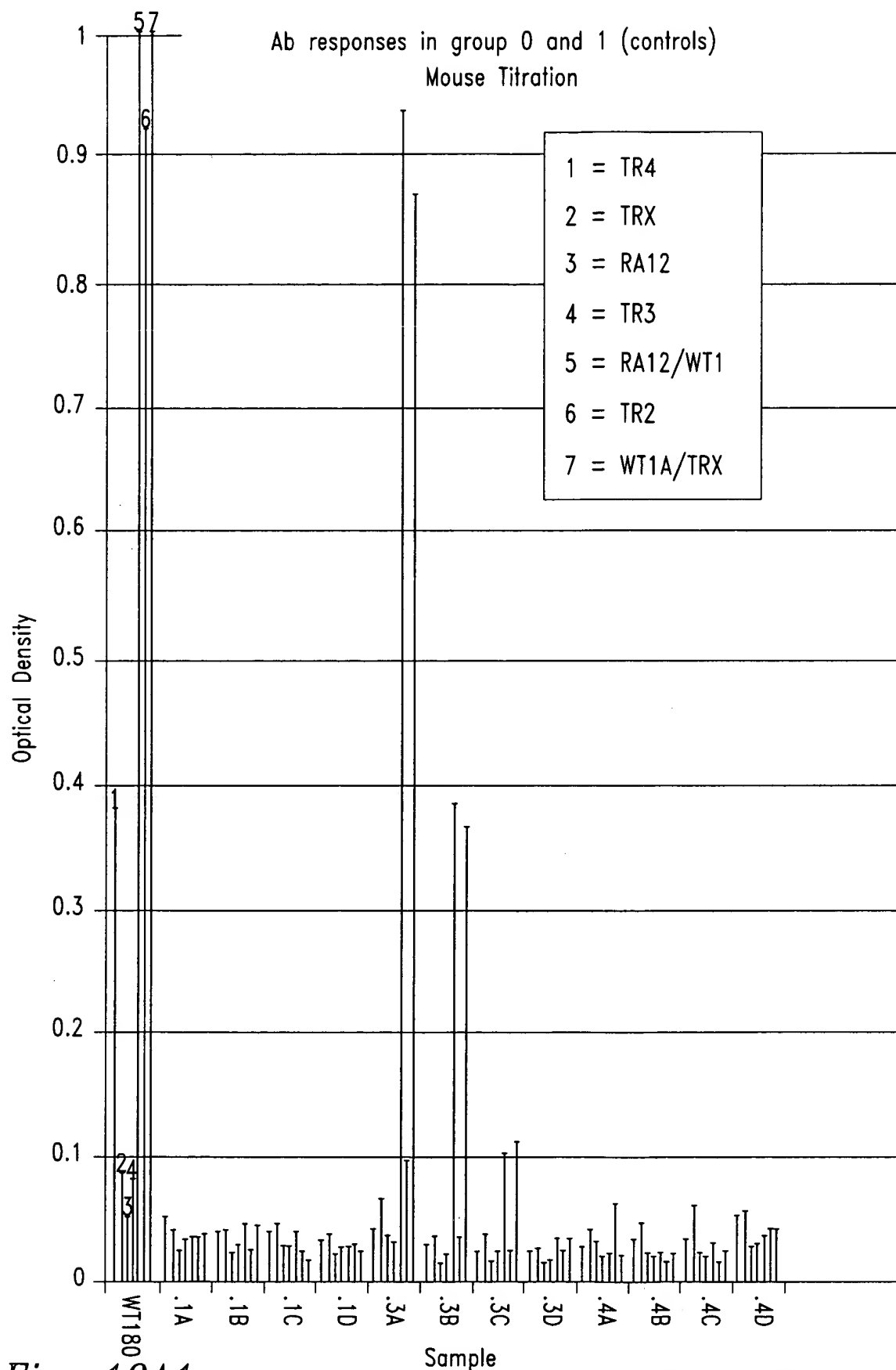


*Fig. 17*

Characteristics of Recombinant WT1 Proteins Used for Serological Analysis

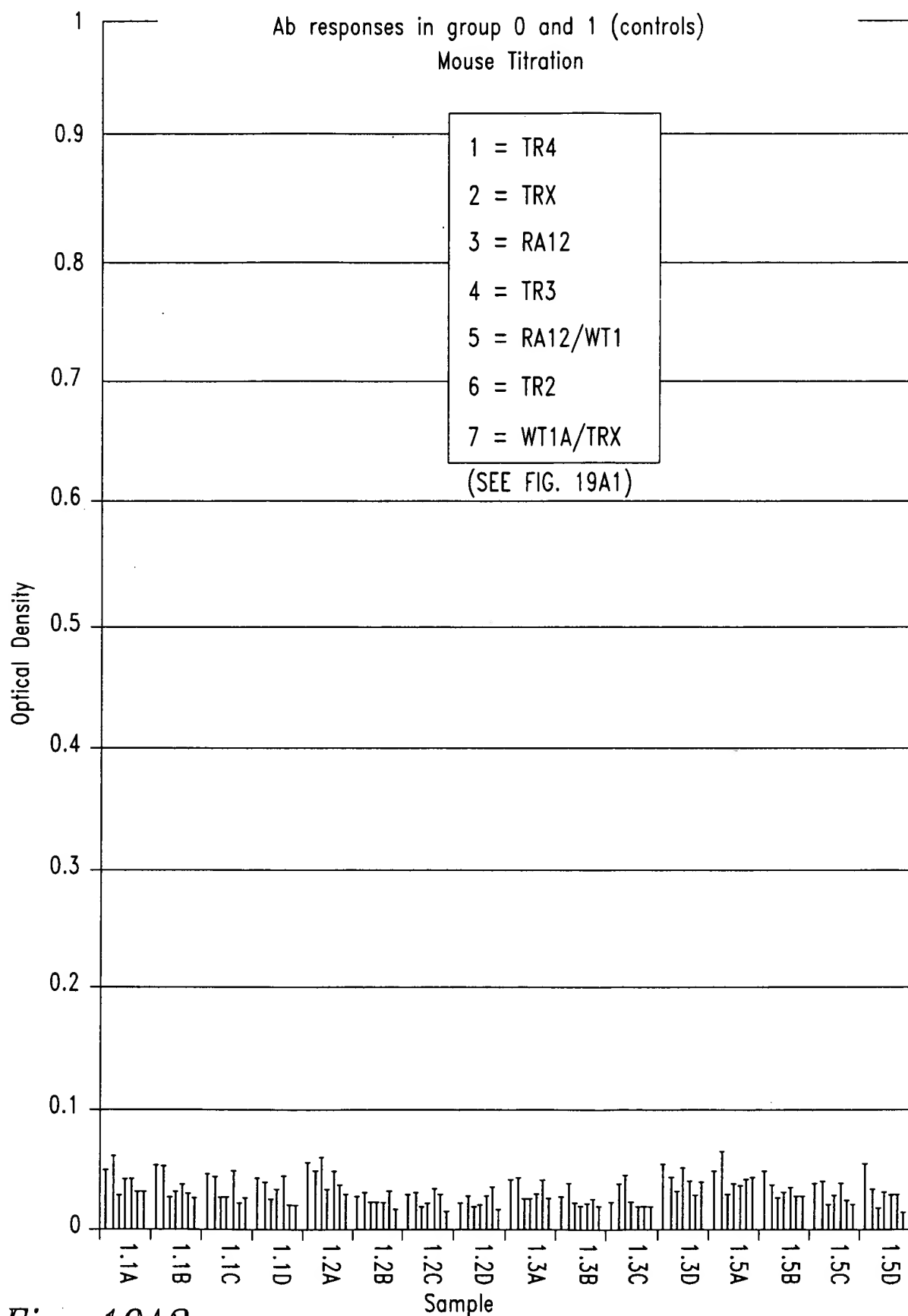
<u>NAME</u>	<u>Recombinant Protein</u>	<u>WT1 Amino Acid Position</u>	<u>Molecular Weight</u>
WT1/full-length	Ral2-WT1 full length fusion protein	aa 1-449	85kDa
WT1/N-terminus	TRX-WT1 N-terminus fusion protein	aa 1-249	60kDa
WT1/C-terminus	WT1 C-terminus protein	aa 267-449	50kDa

*Fig. 18*



**Fig. 19A1**

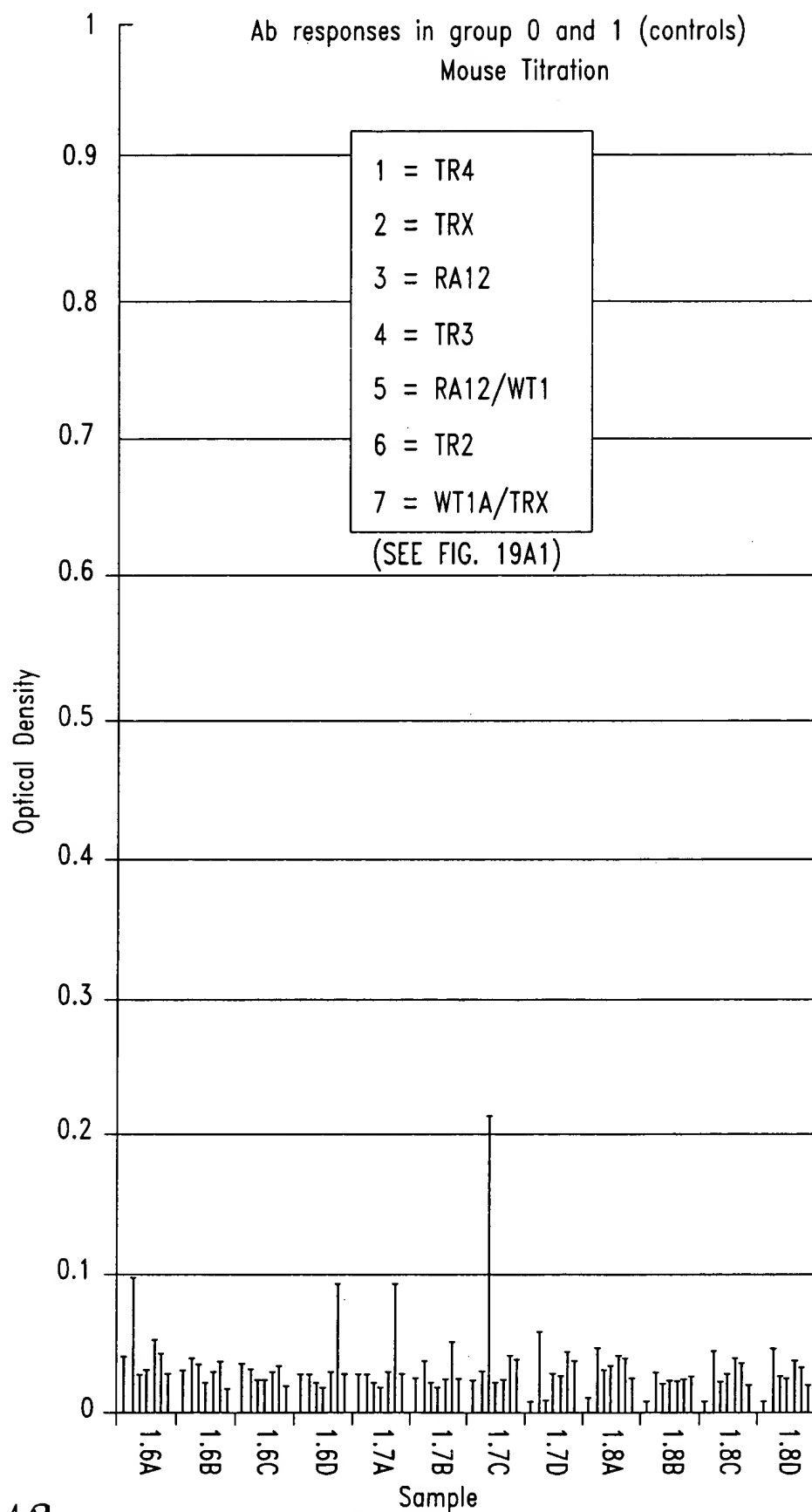
Control groups. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000



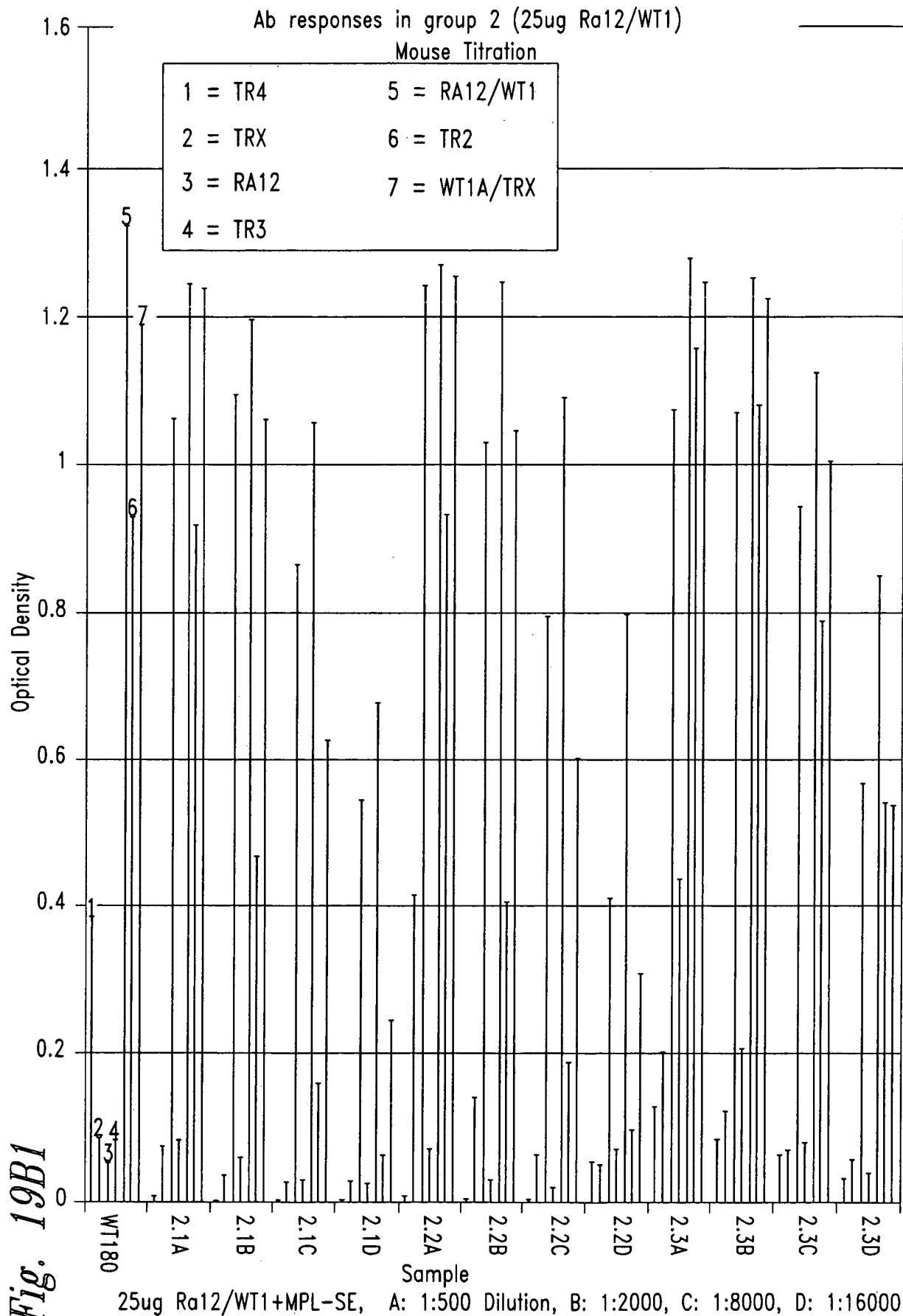
**Fig. 19A2**

Control groups. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000





**Fig. 19A3** Control groups. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000



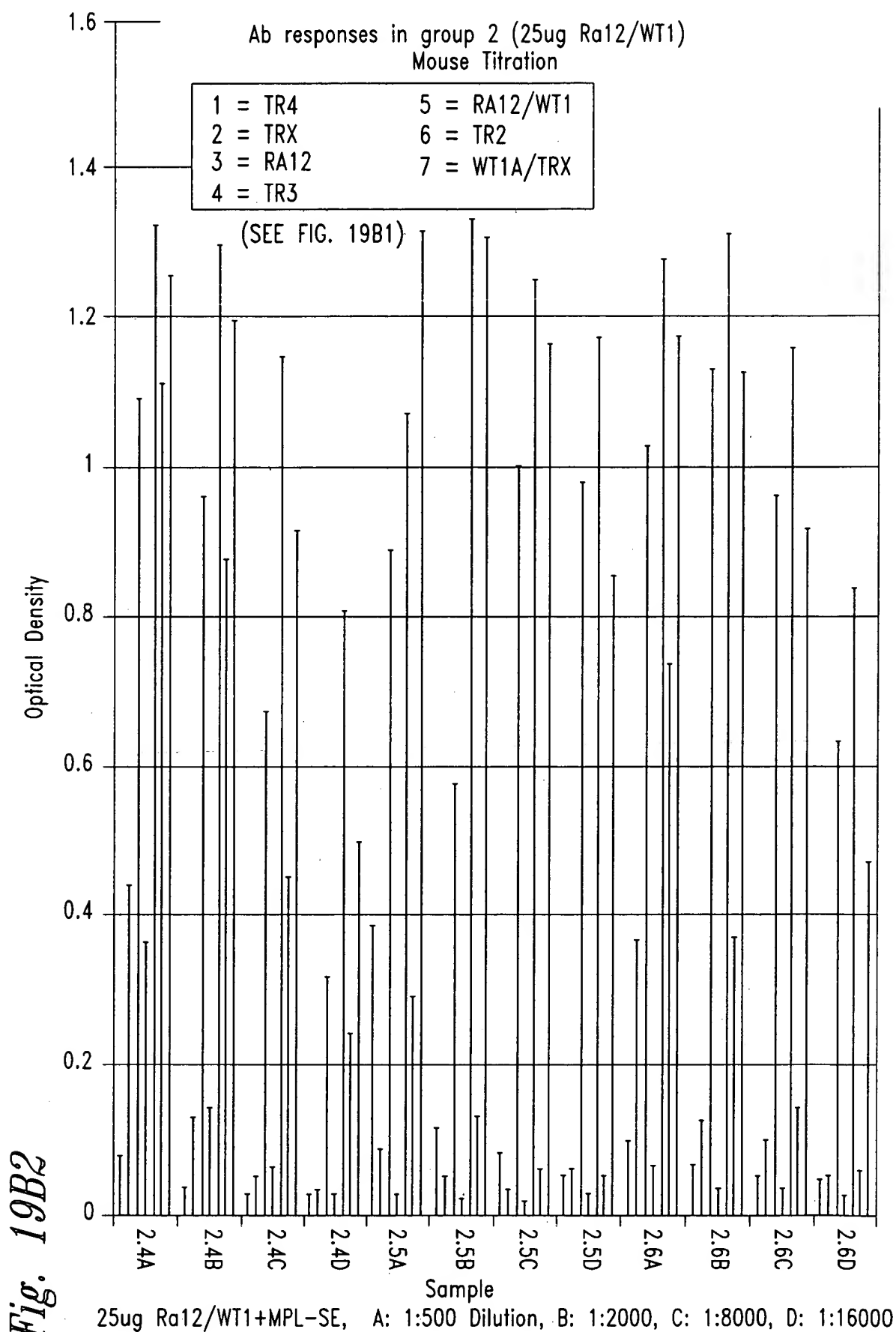
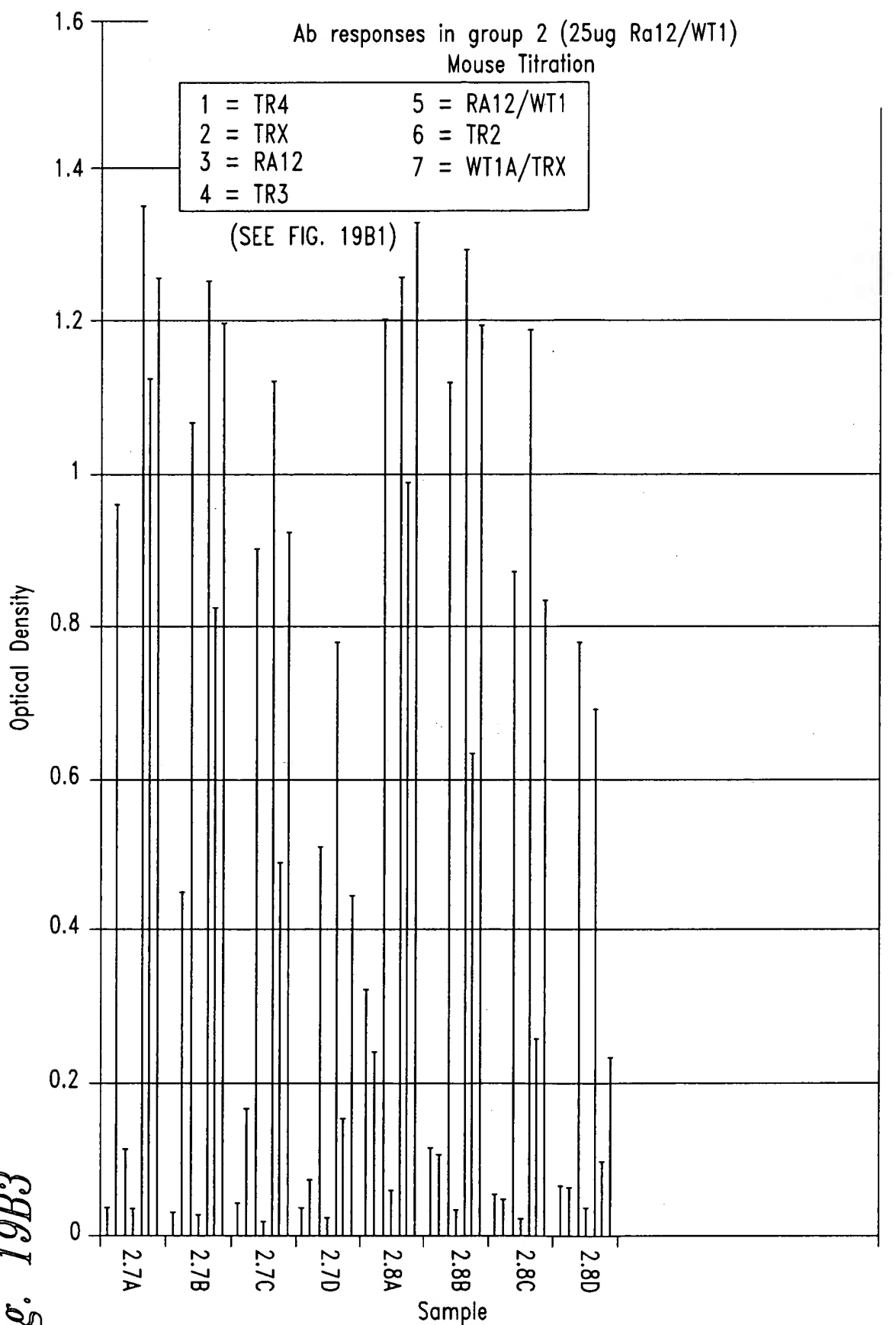
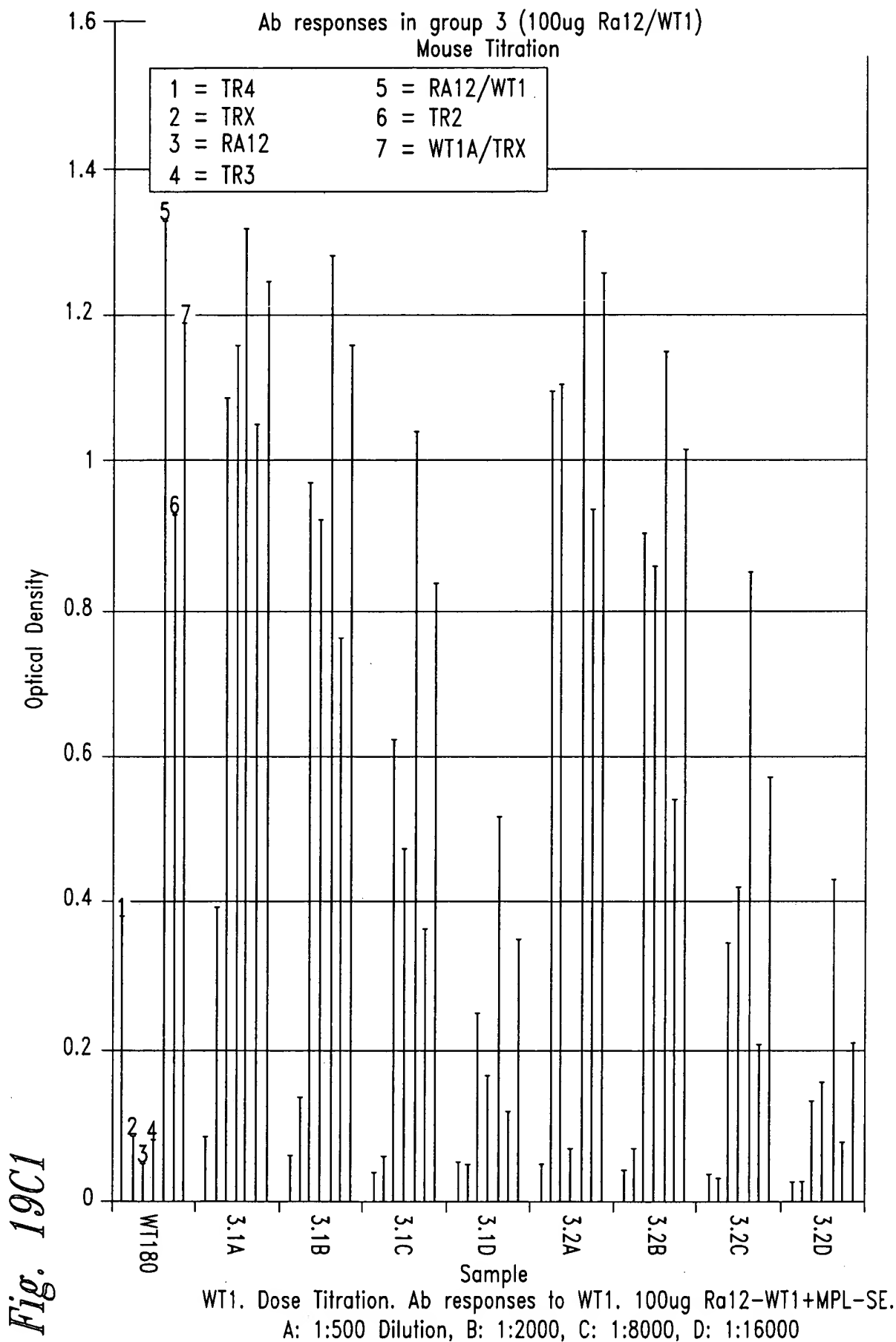


Fig. 19B2



*Fig. 19B3*



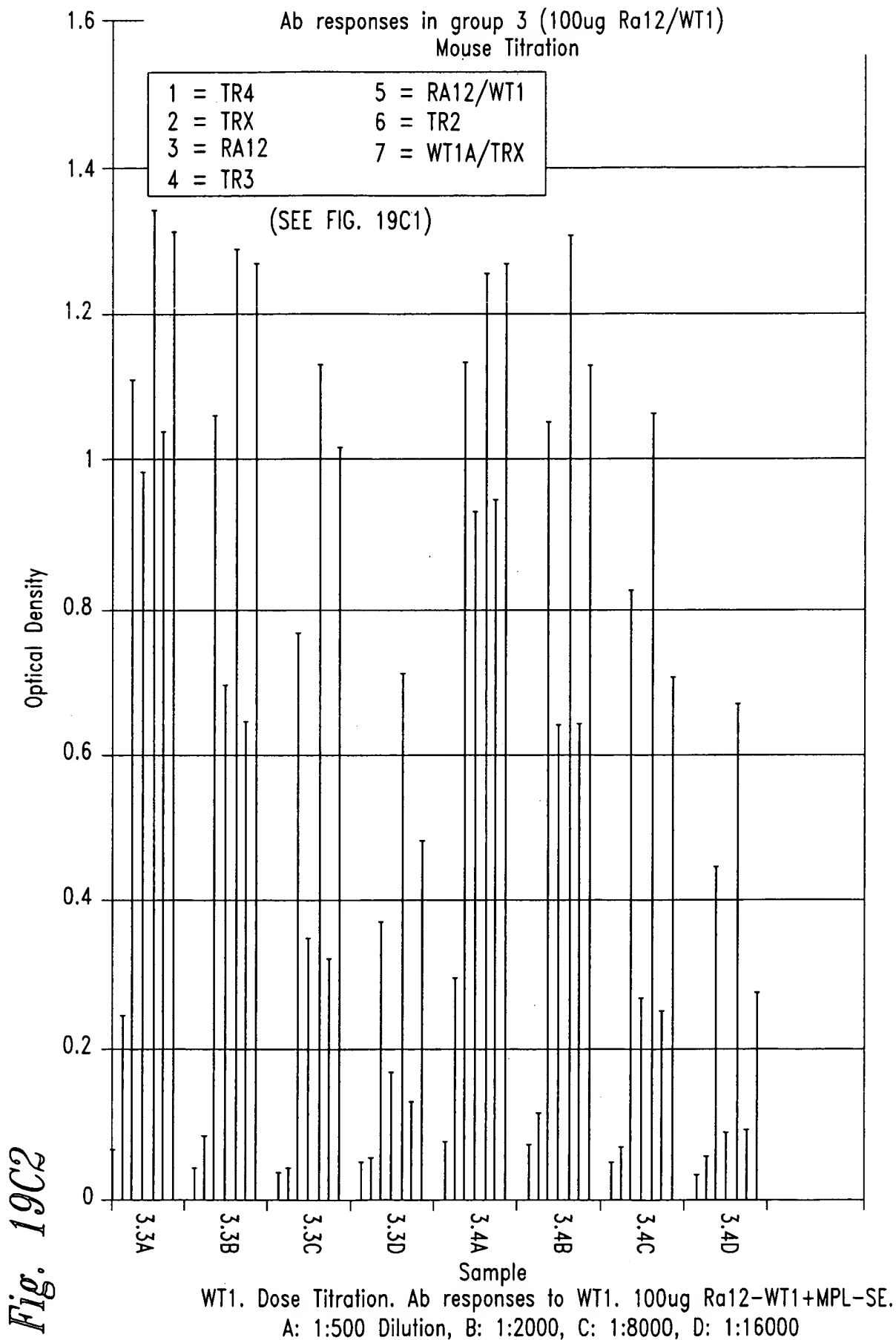


Fig. 19C2

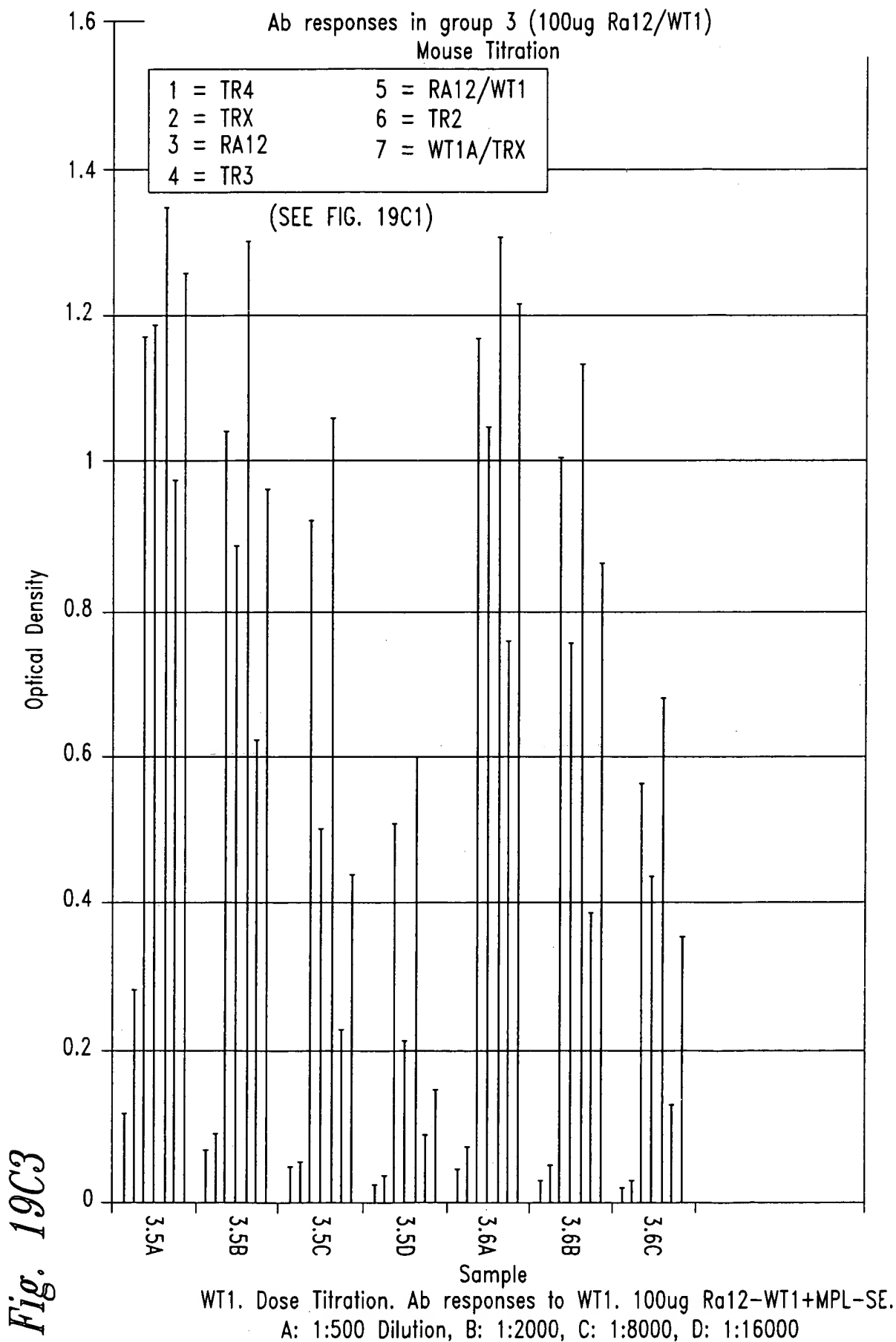


Fig. 19C3

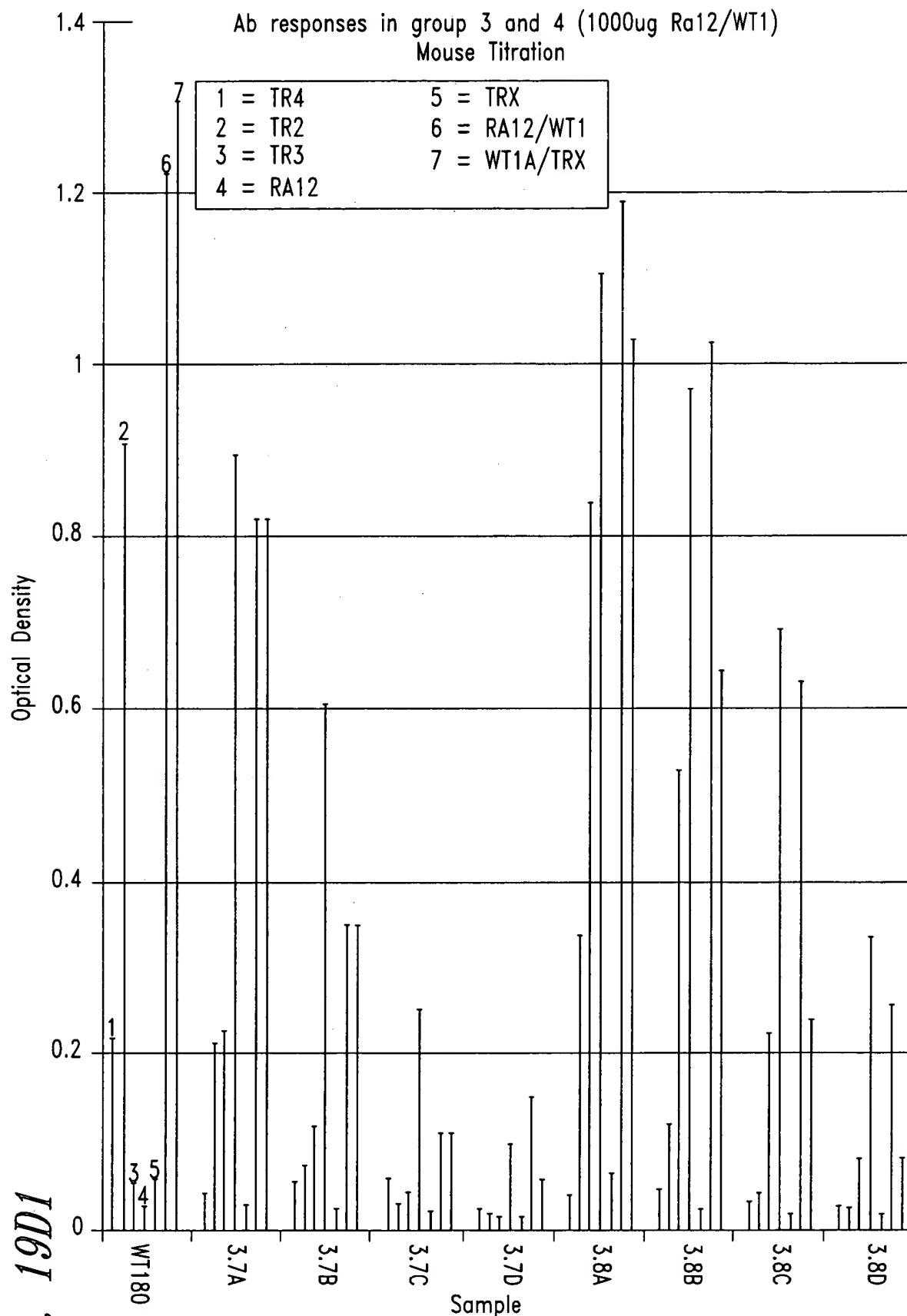


Fig. 19D1

WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE.  
 A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000



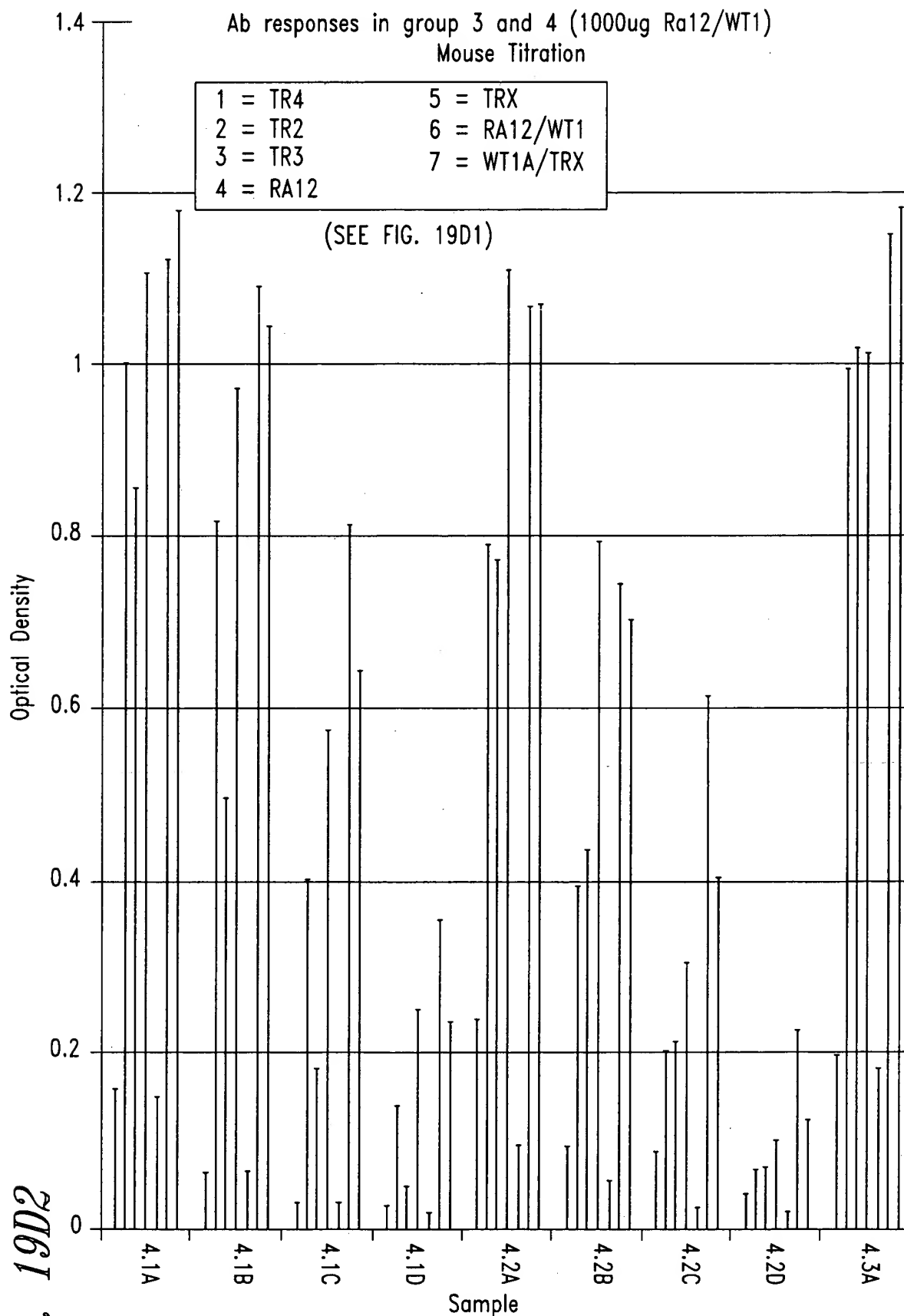


Fig. 19D2

WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE.  
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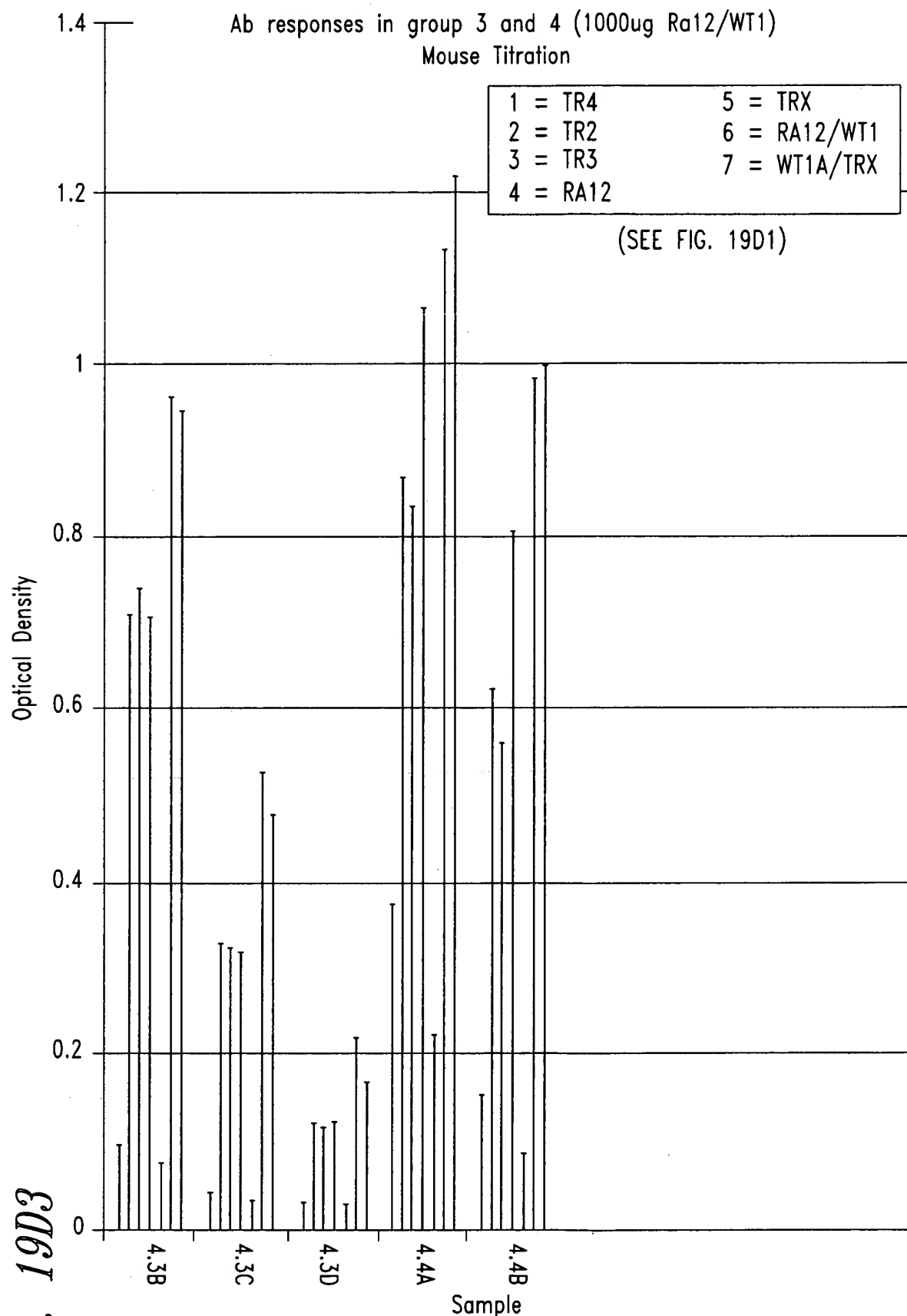


Fig. 19D3

WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE.  
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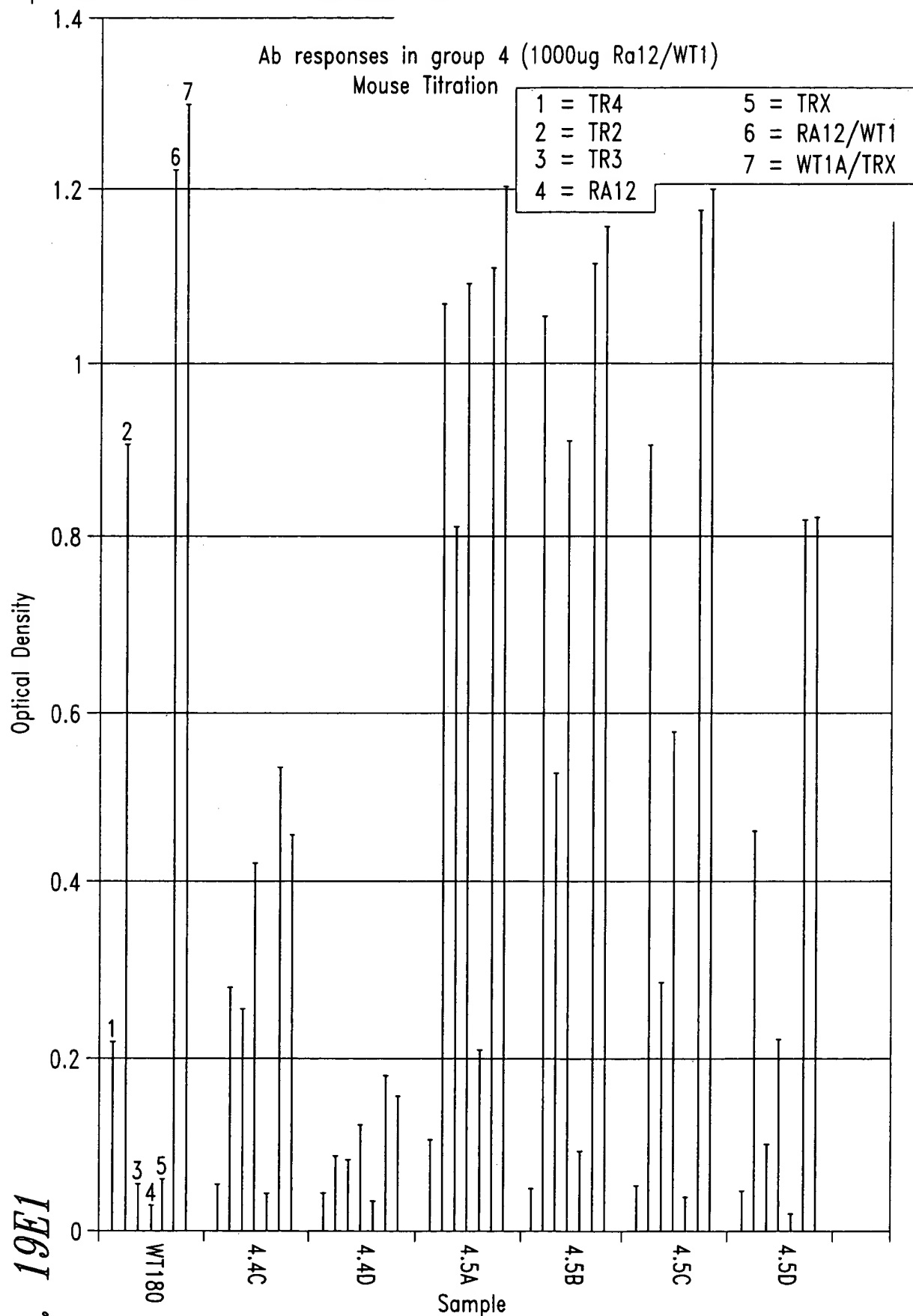


Fig. 19E1

WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE.  
 A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

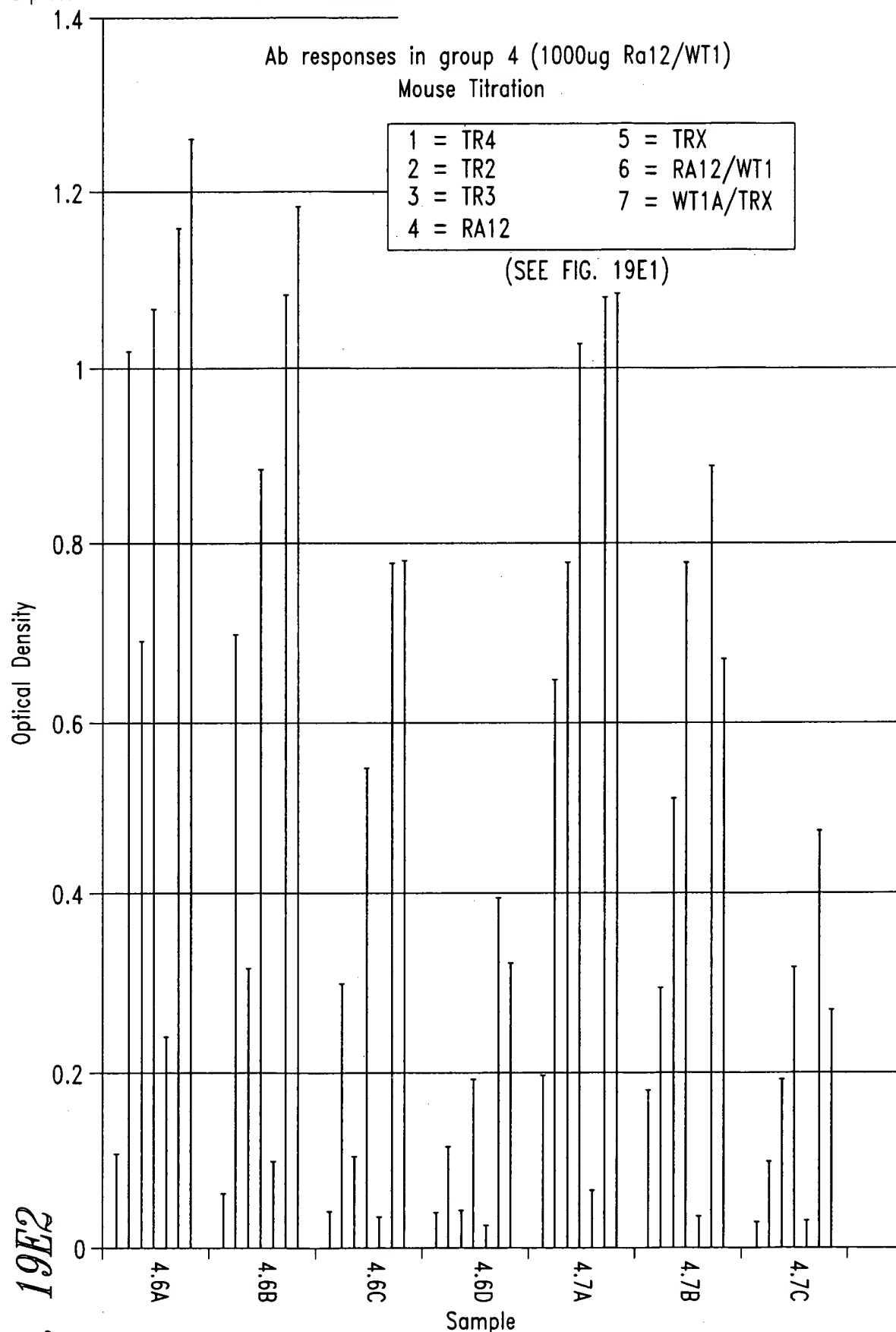


Fig. 19E2

WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE.  
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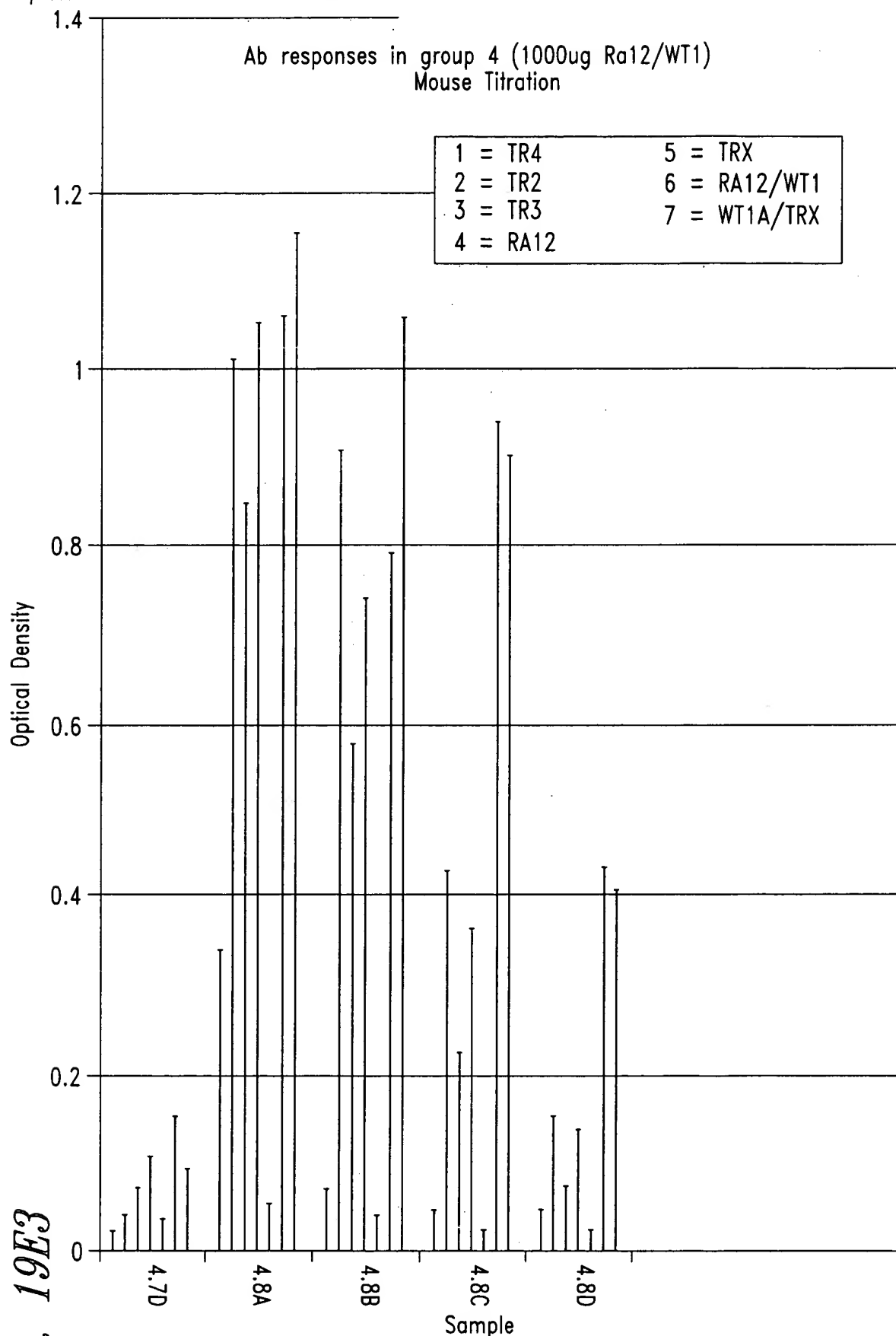


Fig. 19E3

WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE.  
 A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

Proliferative T-cell responses in WT1 protein immunized mice. (Ra12WT1 dose titration, 3x in vivo, after 2IVS)

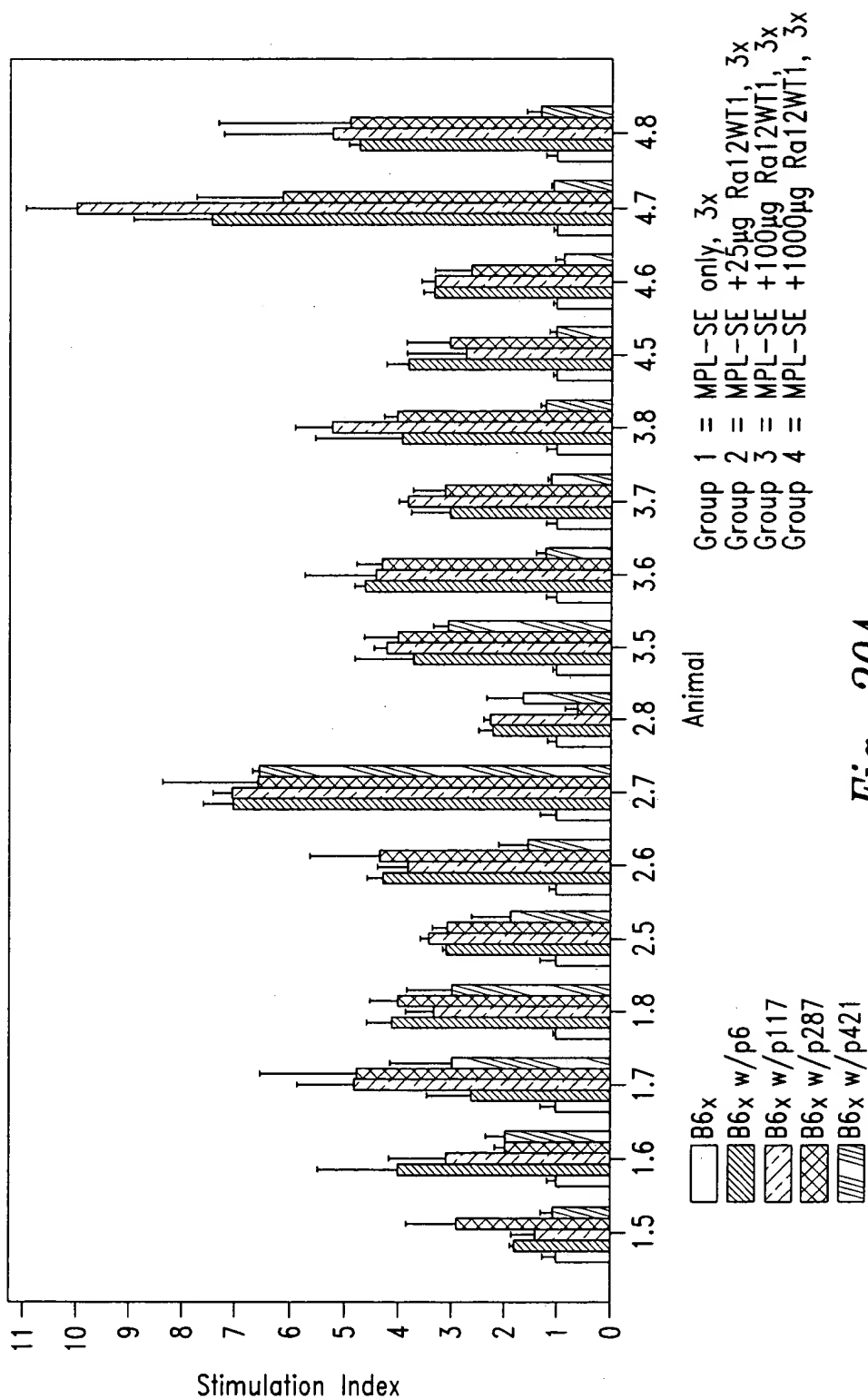
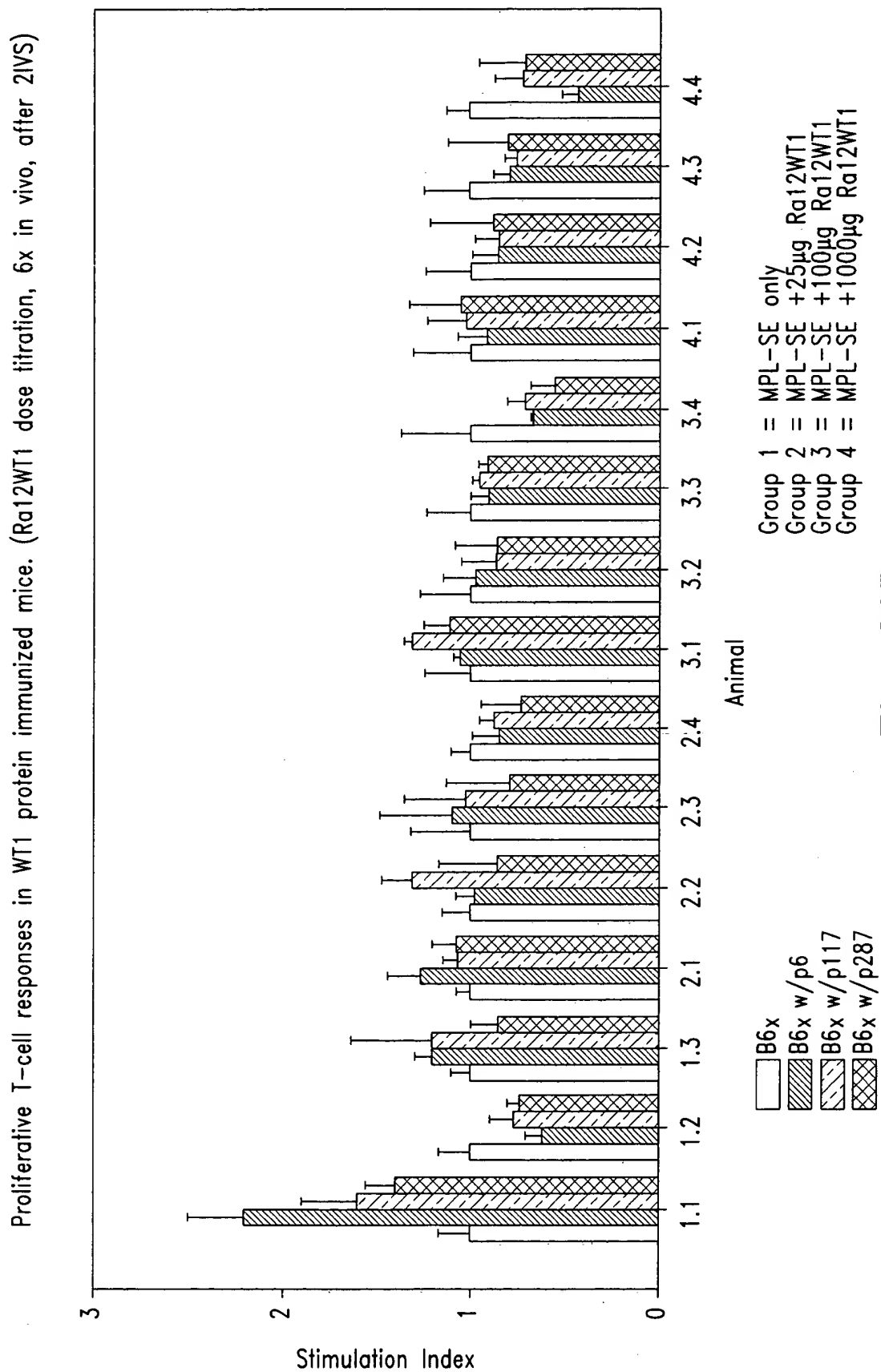


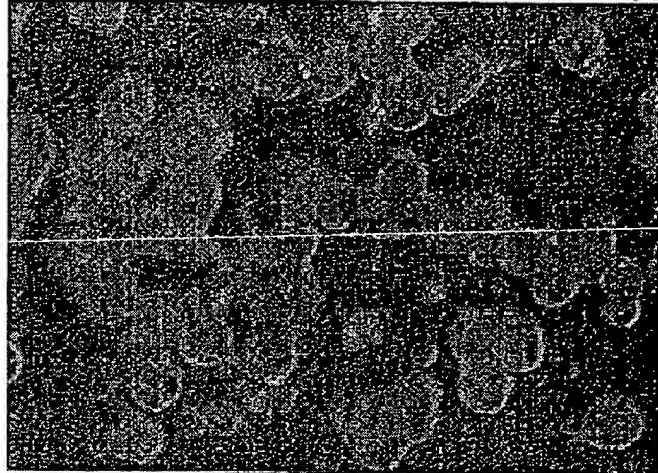
Fig. 20A



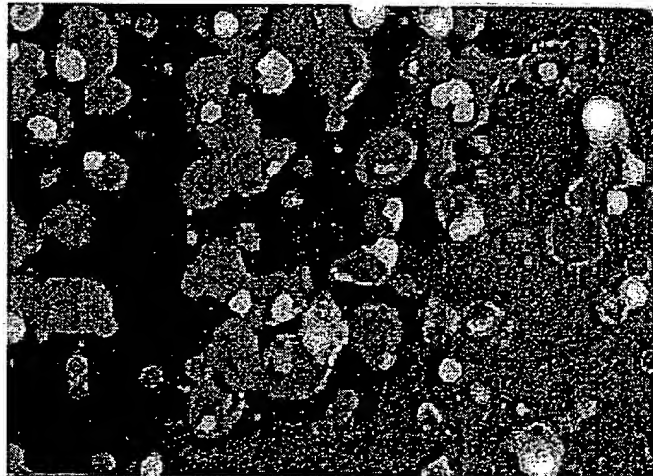
*Fig. 20B*

WT1 expression in human DC following adeno  
WT1 and Vaccinia WT1 infection

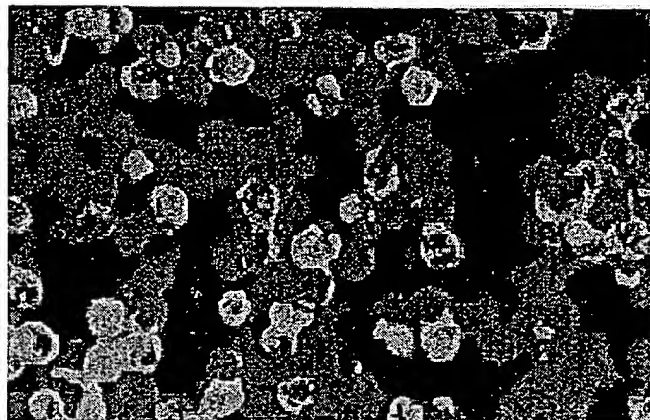
Control  
(uninfected human DC)



Adeno WT1  
(infected human DC)



Vaccinia WT1  
(infected human DC)

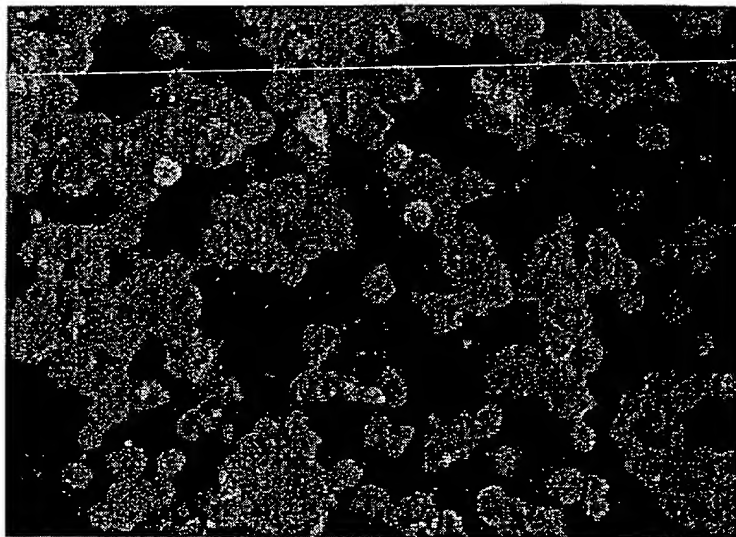


*Fig. 21*

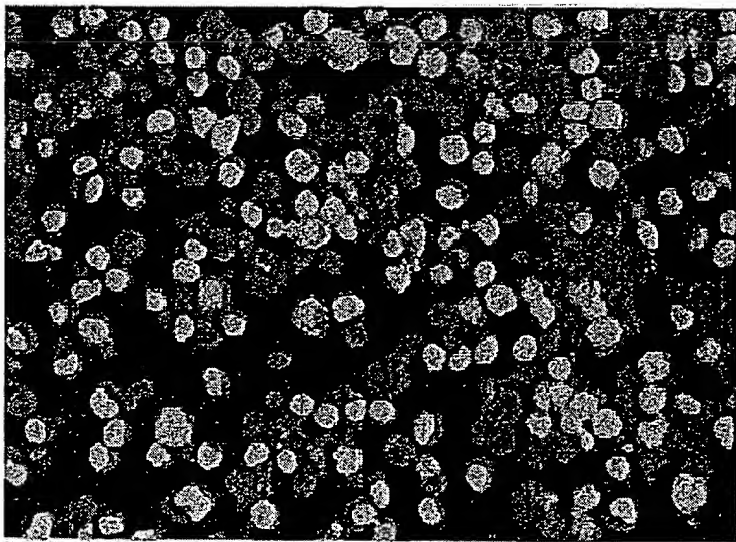


WT1 can be expressed reproducibly in human DC  
following adeno WT1 infection and is not  
induced by a control Adeno infection

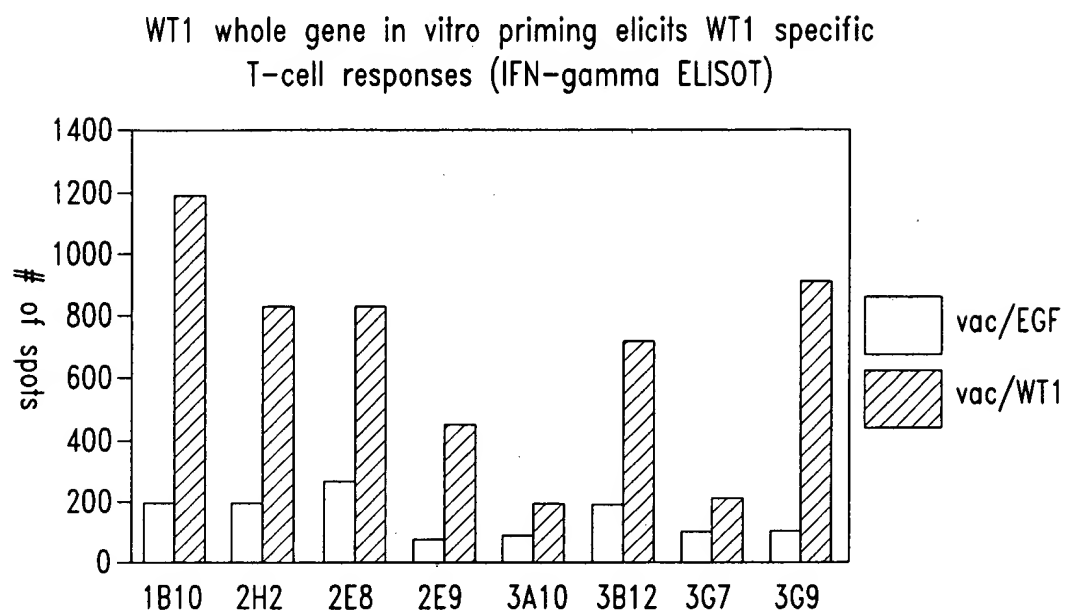
Control  
(Adeno EGFP  
infected human DC)



Vaccinia WT1  
(infected human  
DC)



*Fig. 22*



*Fig. 23*

## WT-1 F cDNA 2-281

GGCTCCGACGTTCCGGACCTGAACGCACTGCTGCCGGCAGTTCGGTCCCTGGGTGGTGGTGGTGGTGGCGCACTGCCGGTTAGCGGTGCAGCACAGTGGG  
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ATACAGAATACACGCACGGTGTCTTCAGAGGCATTCACTGA

## WT-1 F amino acid 2-281

GSDVRDLNALLPAVPSLGGGGGALPVSGAAQWAPVLDAPPASAYGSLGGPAPPAPPPPPPPPHSFIKQEPSWGAEPHEEQCLSAFTVHFSGQFT  
GTAGACRYGPFPPPPSQASSGQARMFPNAPYLPSCLESQPAIRNQYSTVTFDGTSPSYGHTPSHHAQFPNHSFKHEDPMGQQGSLGEQQYSVPPPVYG  
CHPTDSCSGSQUALLLRTPYSSDNLQMTSQLECMTNQMNLGATLKGHSTGYESDNHTPILCGAQYRIHTGVFRGIQ

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